

No. 3. — *Birds of Lower Amazonia*¹

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INTRODUCTION

For several years prior to 1932, A.M. Olalla and various assistants sent enormous collections of birds from the Amazon River Valley to the American Museum of Natural History in New York. The area covered included every important tributary river except the Purus. With headquarters at Obidos, A. M. Olalla continued collecting in 1932 and 1933, and this collection, totalling 4023 skins, was purchased by the Museum of Comparative Zoölogy. The inception of this paper was the identification of this collection, which proved to contain a few novelties, many rarities, and numerous range extensions.

As Snethlage's *Aves Amazonicas* was hopelessly out of date, and the American Museum had no plans for working up and reporting on their Amazonian collections except in connection with other projects, it seemed possibly more useful to try and present a complete and up-to-date list, with such systematic notes as the material at our disposal made possible. In this connection the great Klages Collection at the Carnegie Museum at Pittsburgh was a possible mine of interesting information. We learned that our good friend, Mr. W. E. Clyde Todd, had no immediate plans for preparing a report on this collection, in the press of various other projects approaching completion.

We accordingly sought and obtained permission to study this great collection and to include in this report the specimens in the Carnegie Museum and all information in any way supplementary to that already available. Such generosity and cooperation is most unusual, and we here gladly express our sense of deep obligation and appreciation to the Director of the Carnegie Museum, Dr. Avinoff, and our colleague Mr. Todd, who did everything possible to assist us while at Pittsburgh. By agreement with these two gentlemen we described such new forms as were represented by specimens in both institutions, and Mr. Todd published a series of papers on the novelties in the Carnegie Museum alone.

PRINCIPAL COLLECTIONS

Hellmayer's classic paper on the birds of Pará (Abh. Konigl. Bayer. Akad. Wiss., Math. Phys. Klasse, **26**, 1912) gives a summary of various small collections in Europe from the vicinity of Pará and Marajó Island. These include such historic collections as Natterer's at Caju-tuba in 1835, and Wallace's birds from the Rio Capim in the British Museum. Early American collections were those of Prof. Steere on

Caviana and Marajó Islands in 1871 and 1879 (reported on by Brod-korb in 1937) and two made at Santarem, reported on by Ridgway, Chapman and Riker.

The Goeldi Museum at Pará was founded in 1891 by Dr. Goeldi, who secured some material from Lower Amazonia, but Dr. Emilia Snethlage for years explored up and down the Amazon River with indefatigable energy and enthusiasm, and her important collections culminated in her great work, *Aves Amazonicas* (1914).

Various other Brazilian ornithologists have contributed to our knowledge of the birds of the Lower Amazon, among them C. O. da Cunha Vieira, Dr. Miranda-Ribeiro and Pedro Pinto-Peixoto, all reporting on small collections in Rio de Janeiro or São Paulo. Today the leading ornithologist of Brazil is Dr. O. M. de Oliveira Pinto, whose monumental catalogue of the birds of Brazil, Part I, lists the specimens of a final collection made by A. M. Olalla in 1934, acquired by the Museu Paulista. We are much indebted to him for complimentary copies of his invaluable papers.

As already stated the Olalla collection purchased by the M.C.Z. totals 4023 specimens. Fortunately, Mr. Zimmer of the American Museum, in connection with his studies of Peruvian birds, has studied and listed the material in New York of the difficult passerine families in the superfamily Furnariides. The balance of the Olalla collections in New York are not reported on.

The Klages Collection in Pittsburgh contains 7379 specimens from our area in lower Amazonia; about nine thousand specimens from upper Amazonia and seven thousand from French Guiana and adjacent Brazil afforded magnificent comparative material.

GEOGRAPHICAL NOTES

Area Included

As is almost invariably the case, it is quite impossible to select as a unit an area in which political, geographical and faunal boundaries coincide. Our principal object has been to compile a list of the rich bird-life known to date from the Lower Amazon. The western limits of the area are the western boundaries of the State of Pará, which on the south side of the Amazon, runs between the Rio Tapajoz and Rio Madeira. On the main river, just a few miles west of this boundary line, is the city of Villa Bella Imperatriz or Parintins, and the few birds recorded from here are included. On the north bank, the town of

Faro on the Rio Jamundá is about on the State boundary line. Faunally there is here no embarrassment or difficulty, as new genera and species of birds are encountered the moment we proceed still further west to the Rio Madeira and Rio Negro.

The eastern limits of our area must be selected on a more arbitrary basis, as the coast of Brazil happens to run eastward from the mouth of the Amazon. In this region lies the boundary between the States of Pará and Maranhão, and somewhere in here there is also an important faunal boundary, as we pass from the great river forests of the Amazon to the campos of Maranhão. Little or no exact detail is on record.

Theoretically, our northern and southern boundaries should include the whole drainage system of the Amazon. Actually, this would include a gigantic area, stretching from the Brazilian Guianas to the tableland of northern Matto Grosso, one of the greatest unexplored areas of wilderness in the world, with scarcely a bird skin on record. On the north bank of the Amazon, the rivers are relatively small, and no collecting has been done more than a few miles north of the main river. On the south bank, however, the great rivers Tapajoz, Xingú, and Tocantins rise far south of the boundaries of the State of Pará, but we are here concerned only with the relatively few miles along which ornithological collections have been made. Even the uppermost points reached by Madame Snethlage in her traverse from the Xingú to the Tapajoz are little more than half way to the Pará-Matto Grosso boundary.

As thus outlined, the area included in this report is the lowest quarter of the main Amazon, and its tributary rivers to the degree to which they have been ascended by ornithological collectors. It is consequently a mere fraction of area in terms of square miles of the State of Pará, and a still smaller fraction of the drainage system of the main Amazon.

COLLECTING LOCALITIES

In Lower Amazonia the rivers are the main highways of travel, and the only means of access to most of the interior. Practically all towns, villages and hamlets are on some well known river or one of its tributaries. Thus, if you are at Pará and wish to go to Santa Helena, you must go up the Amazon to the mouth of the Rio Tapajoz, up the Tapajoz to the mouth of the Rio Jamauchim, and up the Jamauchim until you reach this particular hamlet. In much of Lower Amazonia, an overland or "cross-country" trip between two rivers has never

been done, or at least would require a well equipped and competently led expedition in the dry season. The rivers are consequently used almost entirely in orienting place names. First of all, you are on the north or south side of the main Amazon; secondly, you are located on the west or east bank of some tributary, or your locality is defined in terms of the mouth of the nearest well known river. Thus, Arumanduba is on the north bank of the Amazon, between the Rio Parú and the Rio Jary.

It is important for readers to remember that the Brazilians frequently use the terms right and left for river banks, in which case the river is always thought of as being descended. This is quite simple in the case of a river like the Tapajoz, flowing from south to north, where the east bank is automatically the right bank, but this situation is reversed in those rivers flowing into the Amazon from the north, and one sometimes has to stop and think before realizing that the right bank of the main Amazon is the south bank.

In this connection Brazilian Portuguese has adopted certain Indian words into the language which frequently occur in place names. *Igarapé* means stream, creek, or bayou; *cachocira* means a rapid; *assú* means big. Such local place names have often in the past been selected as ornithological collecting localities, with exceedingly poor judgment. Fortunately, we know approximately where Igarapé-assú is. It is nothing in the world but a large creek, an affluent of the Rio Acará, above the town of Acará. Two or three seasons of particularly heavy freshets and floods might completely eliminate some *igarapé*.

Any atlas map of Brazil shows all the principal rivers and towns mentioned in this report. Minor place names can readily be found by consulting the map at the end of Snethlage's *Aves Amazonicas*. Details of place names on the Rio Tapajoz can be found on the map in Snethlage's article in *Bol. Mus. Goeldi*, 7, 1910. For the convenience of the reader, the principal localities are roughly placed in the schematic arrangement adopted below. We proceed from west to east.

I. North bank of main Amazon

Rio Jamundá—Faro (Snethlage and A.M.N.H.)

Obidos, a large city and port, with numerous minor collecting stations near by. The Carnegie Museum has a large collection from some islands in the Amazon near Obidos. (Numerous collectors)

Rio Maecuru—Cachoeira Muira and Igarapé de Paituna (Snethlage)

Monte Alegre and Ereré (chiefly Snethlage)
Rio Parú (no collections)
Arumanduba (Snethlage)
Rio Jary—So. Antonio de Cachoeira (Snethlage)
Macapá (Snethlage)
Amapá (Snethlage)

II. South bank of main Amazon

Villa Bella Imperatriz or Parintins (A.M.N.H.)

Lago Grande (M.C.Z.)

Rio Tapajoz (all collectors)

- a. left bank—Villa Braga, Itaituba, Pinhel, Boim
- b. right bank—Apaçy, Miritituba, Aveiros, Caxiricatuba, Tauary, Pinhy
- c. Above or upstream from these localities the Rio Jamauchim comes in from the southeast.

Santarem, a small city and port (all collectors)

Cussary, about half way to the

Rio Xingú-Victoria, Boa Vista. Just upstream from these towns, the Rio Iriri debouches from the southwest, and still further inland the Rio Curuá comes in from the southwest (Snethlage and A.M.N.H.)

Rio Tocantins (Snethlage and A.M.N.H.)

- a. left bank—Arumatheua, Alcobaça, Cametá
- b. right bank—Baiaõ, Porto do Moz

Rio Mojú

Rio Acará-Acará, Igarapé-assú

Rio Capim, which flows into the

Rio Guamá—Ourem

Pará, the capital city, also known as Belem, has numerous suburbs, among them Providencia, Ananindeua and Val-de-Caes.

Railroad from Pará to Bragança on the Atlantic.

Well known stations are Benevides, Peixe-boi, and Quatipuru. St. Antonio do Prata is a small town south of Peixe-boi.

III. Mouth of the Amazon

Innumerable islands, of which the very large one is Marajó.

Two small outside islands are Cavianna and Mexiana.

An excellent gazetteer of localities worked by older collectors can be found in Hellmayr's classic paper in *Abh. Königl. Bayer. Akad. Wiss., Math. Phys. Klasse*, 26, 1912, pp. 84-85. Of these the only important

one, not on Snethlage's map, is Natterer's famous station Cajútuba, a beach on the sea-coast northwest of Cintra. Here Natterer collected 105 years ago various wading and sea birds, never since reported from the region.

Some readers may like to get some idea of the geography of Lower Amazonia. In addition to the standard books of travel on the Amazon River, the following articles are recommended:

1. Snethlage, Bol. Mus. Goeldi, 6, 1910, pp. 226-235, deals with the savannahs on the upper Tocantins.

2. Snethlage, *ibid.*, 7, 1910, pp. 49-92, map and 15 plates, deals with her famous trip up the Rio Xingú and her traverse across country to the Rio Jamauchim.

3. Ducke, *ibid.*, pp. 100-197, and 12 plates, while primarily botanical, gives an excellent idea of the types of country around Faro and Obidos.

4. Müller, Abh. Königl. Bayer. Akad. Wiss., Math. Phys. Klasse, 26, 1912, pp. 1-80, describes the savannahs of Marajó Island and the country near the capital city of Pará.

Collecting Localities of A. M. Olalla

Rio Tapajoz: Santarem

A locality situated at the junction of the Amazon with the river of this name. A small city, with considerable commerce, and a port that can accommodate any of the local ships. The built-up part is surrounded by savannahs for a distance of about two kilometers, beyond which the dense vegetation, high and savage, begins. The land is relatively level as far as the Hacienda of Piquiatuba, where a slope begins and ends with the plateaus of the farms of San José. The climate is healthy, without plagues of mosquitos. Birds abundant, but mammals rare.

Rio Tapajoz: Caxiricatuba

A locality situated on the eastern shores of the Rio Tapajoz about 21 miles from Santarem; the place is inhabited by two native families. The terrain is varied, including Igapò on the shore of the river, and there is dry land with virgin forest in the center. Birds and mammals relatively common.

Rio Tapajoz: Tauary

Near Caxiricatuba, about 24 miles from Santarem, and is also on the east side of the river. The *igarapé* is navigable for small craft in the winter (wet season); some natives live there. The terrain and flora

are similar to those of Caxiricatuba. Birds and mammals abundant. An *igarapé*, with a fairly long course from its source to its junction with the Tapajoz.

Rio Tapajoz: Pataúá

The central locality situated about 4 miles to the east of Tauary. Region uninhabited; virgin forest; terrain varied and dry. Birds and mammals abundant.

Rio Tapajoz: Pinhy or Piny

About two miles from Tauary, upstream and on the same bank of the Rio Tapajoz. A small *igarapé*, navigable at the height of the wet season, and inhabited by a few "caboclos." The terrain and flora show the same characteristics as those of Tauary. Birds and mammals abundant.

Rio Tapajoz: Boim

A small town situated opposite Tauary on the west bank of the Rio Tapajoz. A port where a few small boats stop, with a little commercial activity. Climate healthy; dry land up to the bank of the river; the forest destroyed on the river bank, but intact within. Flora notable for the abundance of "Castaneros" (*Berthileta excelsa*). Birds and mammals relatively abundant.

Rio Tapajoz: Pinhel

A small town, almost abandoned, but shown on almost all maps; located about 29 miles from Santarem on the west bank of the Tapajoz. It is surrounded by relatively level land covered with dense vegetation; beaches are exposed on the river bank at all seasons. Birds and mammals rare.

Rio Amazonas: Lago Grande

An extensive region, situated on the south shore of the Amazon between the cities of Obidos and Santarem. A central region where cattle raising is the principal occupation; low and swampy land in the wet season; the flora extensively destroyed because of the great natural and artificial fields that circle the region; inhabited by quite a few people; birds very common; mammals almost never found.

Rio Amazonas: Boca do Igarapé Piaba

A locality situated at the entrance of the paran de Obidos (going up the river) about 12 miles from the city of Obidos on the north shore of the Amazon. The terrain completely level and swampy in the wet season; the flora typical of the lowlands of the Amazon, i.e. the vegetation low and sickly, destroyed in some places where artificial fields for cattle raising have been made; birds and mammals abundant but

very few forms represented. No collections have previously been made in this locality.

Rio Amazonas: Lago Jauary: Livramento

A locality situated about 6 miles to the northeast of Boca do Igarapé Piaba. In the wet season it is a large lake called Jauary; in the dry season it is said to dry up, only a small channel navigable for canoes remaining. There exist, also, some other small lagoons of little importance. Quite a few people live in the region. The terrain and the flora are just like existing at Boca do Igarapé Piaba. In this region, also, no collections have previously been made.

Rio Amazonas: Lago Cuipenz o Cuipena

A locality situated between the Boca do Igarapé Piaba and Livramento to the northwest, about 8 miles away. Distribution of the land: to the north, elevated, dry, and above water at all seasons; virgin vegetation, abundance of chestnuts, inhabited only at the season of the exploitation of these nuts, i.e. March to June; to the south, east and west, both the terrain and the vegetation are exactly similar to those of other parts of this region. No collections have previously been made in this region.

Rio Amazonas: Igarapé Matta

A locality near Igarapé Piaba on an island of dry land.

Rio Tocantins: Cametá

A small city situated on the left bank of the Tocantins River; a place sufficiently well known to the scientific world, and is found on all maps. Various collections have been made there.

Brazil, Belem, Bosque

This locality includes the surroundings of the city of Belem (Pará) on the central side, where the terrain is in part high and in part subject to floods; the forest is destroyed in some places.

Brazil, Belem: Val-de-Caes

This locality is situated about a league away on the margin of the river, down stream; a place relatively thickly populated but with sufficiently wild vegetation in the places where there are no inhabitants. The central part of this locality is completely wild. In these woods the peccary, penelope and other mammals and birds, which live entirely in uninhabited woods, have been seen.

Brazil, Rio Acará: Villa Acará

A locality situated on a bank of the river of this name; the region unhealthy, the population decadent and completely out of commission

because of malaria and other diseases. The place is found on all maps. The birds killed in this locality come exclusively from the region near to the town. On this side the terrain is high, and with woods in which hunting is easy, but destroyed in places near the town, and wild in the center. The side opposite the river is impenetrable due to the many palm trees, called "morighe", in which is found *Berlepschia rikeri* (Ridgway). Some of these palms are also found in the town.

ECOLOGICAL AND DISTRIBUTIONAL NOTES

In marked contradistinction to those parts of tropical America which contain mountain systems, a gigantic area of eastern South America has a uniformly humid tropical climate. As Chapin has so clearly shown in his study of the avifauna of the Congo, ecological factors are consequently of primary importance in the distribution of birds. Quite the most important of these is the presence of natural savannahs in the sea of primeval tropical rain forest.

This subject will receive further notice, but is mentioned here first because it explains the occurrence of two distinct Faunas in Lower Amazonia. The principal one, of course, is the Guiana-Amazonian Fauna to which the very great majority of the birds belong. A totally different one is encountered the moment we reach the higher "campos" of central Brazil or the more arid coast of Ceará and Maranhão. Birds characteristic of this fauna occur on the great savannahs of Marajó and other islands at the mouth of the Amazon, on certain savannahs on the upper reaches of the Rio Tocantins, and a very few have been collected on the north bank of the Amazon at Monte Alegre, where the savannahs deserve much more careful exploration. (A very few are reported locally elsewhere.) A list of these birds is given below; all are common and widely distributed in central and southern Brazil.

Crypturellus obsoletus griseiventris
 " *undulatus adspersus*
Rhynchotus rufescens atingae
Polyborus plancus brasiliensis
Uropelia campestris
Guira guira
Polytmus guainumbi thaumantias
Trogon v. variegatus
Nystalus maculatus

Colaptes campestris chrysosternus
Chrysoptilus melanochloros mariae
Leuconerpes candidus
Lepidocolaptes angustirostris coronatus
Casiornis rufa
Xolmis cinerea
 " *velata*
Suiriri affinis

Mimus saturninus	Sporophila leucoptera mexianae
Turdus amaurochalinus	" bouvreuil
Archiplanus solitarius	" caerulescens
Agelaius cyanopus	

Returning now to the question of ecological habitats, Snethlage (Journ. f. Ornith., 61, 1913, pp. 469-539) gives the following classification.

- I. Low land subject to flooding in the rainy season—the *varzea* of the Brazilians.
 - a. Virgin forest
 - b. Savannahs or *campos*
- II. High ground never flooded
 - a. Virgin forest
 - b. Savannahs or *campos*
- III. Scrub growth of at least two types, caused by the destruction of the original forest, the *capoeira*.

One point to emphasize here is the almost incredibly minute differences in habitat which affect the presence or absence of many humid tropical forest birds. Some like the two species of *Automolus* and the flycatchers, *Knipolegus* and *Phacotriccus*, are strictly riparian. The little *Sicalis columbiana goeldii* is practically confined to grassy patches on river banks. The virgin forest can be divided into at least four "associations:" (1) the ground floor (2) the undergrowth and shrubbery (3) the trunks and lower branches (4) the "crown" or tops of the trees, where recent studies in British Guiana have proved the occurrence of a special insect fauna. While many birds will be found in two or more of these divisions, some are strictly confined to each one. The same divisions apply to the *varzea* forest. Here a fascinating problem presents itself—what becomes of the birds of the first two divisions during the season of flood?

As the rivers are the highways of travel, and the principal cities and towns are on the rivers, it follows that the *varzea* birds are much better known and more abundantly represented in collections. Comparatively few expeditions have penetrated to points up the rivers to high ground and have stayed there any length of time. The rarity of many "high ground" forest species will prove to be more apparent than real.

With hundreds of species of birds, however, there is as yet little or nothing on record as to their habitat preferences and seasonal changes in preference, if any. In other cases, botanical knowledge runs ahead

of the ornithological. Near Jamundá, Rio Faro, for instance, are stretches of grassy sand dunes with special trees and shrubs. It would be difficult, if not impossible, to produce a list of birds characteristic of this habitat.

Of very great importance in the distribution of the birds are the topographic boundaries provided by the main Amazon and its principal tributaries. Many decades ago people began to be aware that certain birds like the Trumpeters would not cross a river. But our knowledge today of the degree to which birds are sedentary in tropical forests is greatly increased. The Ant-birds furnish an excellent illustration of innumerable subspecies, the ranges of which are confined to the area between two great rivers. There are, however, many exceptions and anomalies, and in certain cases birds are crossing the Amazon between Obidos and Santarem and further up river near Villa Bella Imperatriz; common on one bank, they are rare and little known on the other, where they would appear to have gained a bare "toe-hold" only. The following principal groups can be distinguished.

1. Species of the Guianas south to the north bank of the Amazon. In a small number of cases they cross this river at its mouth and occur near Pará, but do not range very far up-river on the south side.

2. A group of representative species on the south side of the Amazon balances group 1 in part.

3. Genera and species of far upper Amazonia range eastward down river for varying distances. Many stop at the Rio Madeira, others reach the left bank of the Rio Tapajoz. Many stop at the Rio Negro on the north side.

4. A group of representative species and subspecies on the south bank in Lower Amazonia balances group 3 in part.

5. Many species range much more widely, from the Guianas to eastern Brazil or farther. When subspecific variation occurs, the main Amazon is the usual boundary. In other cases the population in the Amazon valley is intermediate, but sufficiently distinct from either extreme to bear a separate name. The modern tendency is to name all these intermediate populations.

6. A small group of endemic species, practically confined to our area on the south side of the Amazon, not clearly representative of anything else. Examples are *Pyrhura rhodogaster*, *Conopophaga roberti*, and *Pipra iris*.

7. It follows that the greatest number of endemic species and subspecies occur on the south bank in our area.

8. These various groups clearly fit in to the concept of an Amazonian

Sea in the past. A relatively recent area has been invaded from the north, west, and south, and the invasion may still be going on.

9. The enormous avifauna is due to the sedentary nature of many of the birds, the bounding effects of the great rivers, and the ability of the birds to adapt themselves to relatively minute ecological habitats.

In the systematic list beyond we have been careful to point out all cases where birds belong to one or another of these groups.

As a matter of interest a list of the known migrants and winter visitants is appended. Many Shore-birds, the Gray-cheeked Thrush, the Blackpoll and Connecticut Warblers and Bobolink migrate across the Amazon west of our area. They are perhaps following an ancestral route west of the Amazonian Sea.

MIGRANTS OR WINTER VISITANTS

<i>Pelecanus occidentalis</i>	from the north
<i>Phoenicopterus ruber</i>	"
<i>Pandion haliaëtus carolinensis</i>	"
<i>Falco peregrinus anatum</i>	"
<i>Haematopus ostralegus palliatus</i>	"
<i>Pluvialis dominica</i>	"
<i>Squatarola squatarola</i>	"
<i>Charadrius semipalmatus</i>	"
" <i>wilsonia</i>	"
<i>Bartramia longicauda</i>	"
<i>Numenius hudsonicus</i>	"
<i>Tringa flavipes</i>	"
" <i>melanoleucus</i>	"
" <i>solitaria</i>	"
<i>Actitis macularia</i>	"
<i>Catoptrophorus semipalmatus</i>	"
<i>Arenaria interpres morinella</i>	"
<i>Limnodromus griseus</i>	
<i>Crocethia alba</i>	"
<i>Ereunetes pusillus</i>	"
<i>Erolia minuta</i>	"
" <i>fuscicollis</i>	"
" <i>melanotos</i>	"
<i>Larus atricilla</i>	"
<i>Glochelidon nilotica</i>	"

<i>Sterna hirundo</i>	from the north
“ <i>antillarum</i>	“
<i>Muscivora tyrannus tyrannus</i>	south
? <i>Tyrannus albogularis</i>	“
“ <i>m. melancholicus</i>	“
? <i>Empidonax varius varius</i>	“
? “ <i>aurantio-atro-cristatus minor</i>	“
<i>Myiodynastes maculatus solitarius</i>	“
<i>Empidonax euleri</i>	“
<i>Progne subis subis</i>	north
<i>Pygochelidon cyanoleuca</i>	south
<i>Riparia riparia</i>	north
<i>Hirundo erythrogaster</i>	“
<i>Virco chiri chiri</i>	south
“ “ <i>viridior</i>	north
“ <i>calidris barbatula</i>	“
<i>Dendroica aestiva aestiva</i>	“

SYSTEMATIC LIST

Family TINAMIDAE

1. TINAMUS TAO TAO Temminck

Type locality: Pará

Para, Cussary (Snethlage); Santarem (Chapman & Riker); Santarem & Rio Tapajoz (Pinto)

1 ♂, 1 ♀ 1? Rio Tapajoz; 1 ♂, Rio Capim

1 ♂, Apacy, Rio Tapajoz (Carnegie Museum)

A widely ranging, but little known Tinamou, with a relatively restricted Amazonian range. Pinto records this species from Monte Alegre on the north bank, but it might prove to be a different subspecies. The species reappears in Venezuela, but this apparently discontinuous distribution may not prove real.

2. TINAMUS MAJOR MAJOR (Gmelin)

Type locality: Cayenne

Obidos (Snethlage, as *T. subcristatus*); Obidos (Conover & Pinto)

1 ♂ imm., 1 ♀, Obidos (Carnegie Museum)

These birds agree perfectly with Cayenne topotypes in the Carnegie Museum.

3. TINAMUS MAJOR OLIVASCENS Conover, 1937

Type locality: Toure-Assu, Rio Acará, Pará

Rio Acará and Rio Tapajoz, left bank (Conover); right bank (Pinto, as *serratus*)

1 ♀, Rio Tapajoz, Villa Braga (Carnegie Mus.)

Apparently a rare bird on the south bank of the Amazon in our area. It would appear to be commoner on the Rio Purus. Two specimens from there agree with the Tapajoz bird and fully support Conover's conclusions on this very distinct race. Birds from the Rio Madeira would presumably belong here also, though they pass as *serratus* (Spix); but Hellmayr's detailed comments in his study of Spix's types shows clearly that they cannot possibly be *olivascens* Conover. It is obvious that this group requires further study. At present two races have a discontinuous distribution and stagger each other in four river valleys on the south bank of the Amazon.

4. TINAMUS GUTTATUS Pelzeln

Type locality: Borba, Rio Madeira

Marajo Island (Hellmayr); vicinity of Pará (Hellmayr, Snethlage, Stone); Santarem (Chapman & Riker)

1 ♀, Benevides, 2 ♂, Santarem, 2 ♀, Rio Tapajoz, left bank (Carnegie Museum).

This species is also known from far upper Amazonia, where specimens should prove separable, judging by Salvadori's comments. (Cat. Birds Brit. Mus., 27, p. 508).

There is still an interesting problem in the life histories of these big Tinamous. No one seems to know how they divide the territory between them.

5. CRYPTURELLUS CINEREUS (Gmelin)

Type locality: Cayenne

Monte Alegre (Snethlage); Marajo Island (Snethlage); vicinity of Pará (numerous collectors); Santarem (Chapman & Riker)

1 ♀, Benevides; 2 ♀, Rio Tapajoz, left bank (Carnegie Mus.)

A relatively rare species, reaching its southern limits on the south bank of the Amazon.

6. *CRYPTURELLUS OBSOLETUS* GRISEIVENTRIS (Salvadori)

Type locality: Santarem

Reported only from the type locality, and Caxiricatuba, Rio Tapajoz (Pinto)

1 ♂, Rio Tapajoz, Pinhy

3 ♂ 4 ♀, Santarem (Carnegie Mus.)

A rare and little known subspecies of a widely ranging species from central Brazil southward.

7. *CRYPTURELLUS SOUI SOUI* (Hermann)

Type locality: Cayenne

Rio Jamundá (Faro), Cussary, Obidos (Snethlage); Obidos (Pinto)

1 ♂ 1 ♀, Obidos (Carnegie Mus.)

The Carnegie Museum possesses 1 ♂ 3 ♀ from French Guiana, which definitely represent typical *soui*. The two birds from Obidos agree with these in that the female especially is a very rich tawny, rufescent and buffy bird, and *soui* would appear to be the extreme in this direction of all the South American races.

8. *CRYPTURELLUS SOUI DECOLOR* Griscom and Greenway, 1937

Type locality: Pinhy, right bank Rio Tapajoz, Pará

Pará (Elliott) in Brit. Mus.); numerous localities near Pará (Hellmayr, Snethlage, Stone, Pinto as *soui*); Boim, Rio Tapajoz (Snethlage); Santarem (Chapman & Riker)

1 ♂, Rio Tapajoz, Pinhy

1 ♂, Benevides, 3 ♂ 1 ♀, Santarem, 2 ♀, Rio Tapajoz, left bank (Carnegie Mus.)

As pointed out in our original description Hellmayr had already characterized this subspecies, but lack of typical *soui* made it impossible for him to go further. It proves to be strikingly different from typical *soui* in that both sexes are duller colored, less tawny above; the female paler and more ochraceous, less tawny below; males, as usual, less different than females, but greyer and browner, less buffy and ochraceous.

There are still many complications and uncertainties, however, in the variations of this species in most of Amazonia. By inference only from Hellmayr's comments, British Guiana specimens are not quite the same thing as typical *soui*. Further extended comments by him on birds from both banks of the Rio Madeira show clearly that these

birds have nothing to do with *decolor*, but differ from British Guiana specimens only in the color of the upper tailcoverts. They have since been described as *hoffmannsi* Brabourne and Chubb, type from the left bank. It will be apparent, therefore, that there may well be one or possibly two valid subspecies here, when real series can be combined, and that specimens from the north bank of the Amazon from Faro might be one or another of these subspecies, rather than *soui*. Further uncertainties develop as we proceed westward. Specimens from the Rio Purus in the Carnegie Museum are once more dull and pale like *decolor*, but on the Rio Solimoes we find another rich tawny bird, exceedingly close to *soui*!

It should now be clear why we are not rash enough to refer Rio Purus specimens to *decolor*. It is certainly striking that the variations indicated are exactly the same geographically as those pertaining to *Tinamus major*.

9. CRYPTURELLUS UNDULATUS ADSPERSUS (Temminck)

Type locality: State of Pará, Brazil

"Pará" (old specimens in Mus. Berlin and Monaco, fide Hellmayr); Rio Maccuru and Rio Tapajoz (Snethlage); Rio Tapajoz (Pinto)

1 ♂ 1 ♀, Rio Acará, Buenos Aires

1 ♂ 3 ♀, Rio Tapajoz, Pinhy and Tauary (do.)

3 ♂, Santarem (Carnegie Mus.)

1 ♂ 1 ♀, Miritituba and Goyana Isl., Rio Tapajoz (do.)

This subspecies is the northeasternmost of the many races of *undulatus*, ranging north to the upper Rio Branco and southern British Guiana, and west to the Rio Madeira. The species is primarily one of campos country or savannahs rather than heavy rain forest which accounts for its absence from the vicinity of Pará. According to Hellmayr, birds from Borba on the right bank of the Rio Madeira are practically identical with Temminck's type. Our two birds from the Rio Acará, the easternmost point of definite record, are more heavily barred on the neck than the Tapajoz series.

Madame Snethlage recorded *japura* (Spix) from the Rio Tapajoz erroneously. It is not known east of the Rio Solimoes. From the left bank of the Rio Madeira to the Rio Purus, we find *confusus* Brabourne and Chubb. Seven specimens in the Carnegie Museum are more heavily barred and vermiculated with blackish above, and on the average somewhat greyer, less buffy, on flanks and under tailcoverts.

10. *CRYPTURELLUS VARIEGATUS VARIEGATUS* (Gmelin)

Type locality: Cayenne

Obidos (Hellmayr, Snethlage)

1 ♂ 2 ♀, Obidos (Carnegie Mus.)

11. *CRYPTURELLUS VARIEGATUS TRANSAMAZONICUS* Todd, 1937

Type locality: Santarem, Brazil

Vicinity of Pará; numerous records (Natterer, Hellmayr, Snethlage); mouth of Rio Tapajoz (Pinto)

9, Santarem; Rio Tapajoz, left bank, 2 (Carnegie Mus.)

A very distinct subspecies, the separability of which was predicted by Hellmayr (Novit. Zoöl., 1905, p. 305), although some of the differences he noted are matters of age or individual variation. We are, of course, familiar with the material in the Carnegie Museum, the basis for Todd's valuable review of this species. To us, however, the birds from the Rio Purus and Rio Solimoes are just half way between the present form and *salvini* of east Ecuador, and we would not refer them to *transamazonicus* for a moment. They may well be left uncertain, until the type of variation on the Rio Madeira becomes known.

12. *CRYPTURELLUS NOCTIVAGUS ERYTHROPUS* (Pelzeln)

Type locality: Manaus, as restricted by Zimmer, 1938

Obidos (Hellmayr, Zimmer, Pinto); Rio Jamundá, Faro Snethlage, Zimmer)

10 ♂, Obidos (Carnegie Mus.)

The series in the Carnegie Museum had enabled us to reach the identical conclusions, just published by Zimmer, 1938, which show that *dissimilis* Salvadori from British Guiana is a synonym.

13. *CRYPTURELLUS NOCTIVAGUS STRIGULOSUS* (Temminck)

Type locality: Pará

Near Pará; numerous localities (Natterer, Goeldi, Hellmayr, Snethlage, Stone, Pinto); Rio Acará (Snethlage); Rio Tapajoz (Pinto); Rio Tocantins and Rio Xingú (Zimmer)

1 ♂ 2 ♀ ad., 1 ♀ imm., Rio Tapajoz, Pinhy

2 ♂ 1 ♀ ad., 1 ♂ juv., Santarem (Carnegie Mus.)

2 ♂, Rio Tapajoz (do.)

By now a relatively well known Tinamou, ranging to the right bank

of the Rio Madeira. Westward it is replaced by *hellmayri* Brabourne and Chubb on the left bank of the same river, a subspecies still practically unknown. The species is apparently lacking on the Rio Purus and the Rio Solimões, and on the north bank of the Amazon, west of the Rio Negro.

14. *CRYPTURELLUS PARVIROSTRIS* (Wagler)

Type locality: Bahia, suggested by Hellmayr

Marajo Island (Snethlage); Santarem (Chapman and Riker).

1 ♂ 1 ♀, Santarem (Carnegie Mus.)

A characteristic species of the "campo" of central and southern Brazil, locally penetrating north to the south bank of the Amazon.

15. *RHYNCHOTUS RUFESCENS CATINGAE* Reiser

Type locality: Rio Parnahyba, Piahy

One specimen from Marajo Island (Pinto Peixoto, 1923)

This record would appear to have been completely overlooked. The bird is referred to *catingae* on purely geographic grounds; the validity of the subspecies has been questioned, at least in part (cf. Pinto, 1938).

Family COLYMBIDAE

16. *POLIOCEPHALUS DOMINICUS SPECIOSUS* (Arribalzaga)

Type locality: Buenos Aires

Cajutuba near Pará (Natterer); Monte Alegre near Pará (Snethlage)

1 ♀, Rio Tapajoz, Santarem (M.C.Z.)

Family PHALACROCORACIDAE

17. *PHALACROCORAX OLIVACEUS OLIVACEUS* (Humboldt)

Type locality: near Banco, Rio Magdalena, Colombia

Marajo Island (Snethlage); Ucurituba, near Santarem (Hellmayr); Cajutuba near Pará (Natterer, Graham)

1 ♂ ad., Tapajoz River, Santarem

Family ANHINGIDAE

18. ANHINGA ANHINGA ANHINGA (Linnaeus)

Type locality: Brazil

Rio Capim near Pará (Hellmayr); Marajo Island (Snethlage); Pará (Pinto).

2 ♂ ad., 2 ♂ imm., 1 ♀ ad., 1 ♀ imm., 1 ? imm.; Rio Tapajoz, various localities

The arrival of this series from Brazil, the type locality, with two others from the lower Amazon, made it possible to compare birds from the United States for the first time. These last prove to average smaller, with markedly shorter bills. There is also an excellent color character. Brazilian birds have a much broader tail tip, at least double that of North American birds, and on the outer tail feathers much more than this. Intergradation is about as follows. An east Ecuador specimen has a bill as long as Brazilian birds, but a short wing, and the tail tip is intermediate. Panama and Yucatan birds resemble Florida specimens in size, but have an intermediate tail-tip. Cuban birds are like Florida series.

As it is more than possible that extreme western and northwestern Brazilian birds might prove to be intermediate, like the east Ecuador bird discussed above, we designate Rio Tapajoz, Pará, Brazil as a restricted type locality. The northern race will be known as *Anhinga anhinga leucogaster* (Vieillot), type locality, Florida.

	♂	♀
Brazil —wing	340-353;	349 90.5
Florida—wing	322-345;	323-338; 75-87
	bill, 93-96	bill, 80-88

Family PELECANIDAE

19. PELECANUS OCCIDENTALIS OCCIDENTALIS (Linnaeus)

Type locality: Jamaica

Itaituba, Rio Tapajoz (Snethlage)

A very surprising record, as the Brown Pelican is unknown in South America, except along the coast of Venezuela and the Guianas.

N.B. Frigate-Birds (*Fregata*) and Boobies (*Sula* ssp.) surely occur off the coast of Pará, but there are no definite records.

Family ARDEIDAE

20. ARDEA COCOI Linnaeus

Type locality: Cayenne

Mexiana Island (Hagmann and Snethlage); Marajo Island (Pinto-Peixoto);
Pataua and Lago Cuipeua (Pinto)

1 ♂ ad., Rio Tapajoz (M. C. Z.)

2 ♀ , Lago Grande (do.)

21. CASMERODIUS ALBUS EGRETTE (Gmelin)

Type locality: Cayenne

Rio Capim (Goeldi); Mexiana Island (Hagmann and Snethlage); Santarem
(Chapman and Riker, Marajo Island (Pinto-Peixoto)

2 ♂, Rio Amazon, Lago Jauary, Livramento (M.C. Z.)

1 ♀ , Rio Tapajoz, Santarem (do.)

22. LEUCOPHOYX THULA THULA (Molina)

Type locality: Chili

Mexiana Island (Hagmann and Snethlage); Santarem (Chapman and Riker)

1 ♂, R. Amazon, Lago Jauary (M. C. Z.)

23. FLORIDA CAERULEA (Linnaeus)

Type locality: Carolina

Mexiana Island (Hagmann and Snethlage); Marajo Island (Snethlage);
Pataua and Lago Cuipeua (Pinto)

1 ♂ imm., R. Amazon, Lago Jauary (M. C. Z.)

1 ♂ ad., R. Amazon, Lago Jauary (do.)

1 ♀ ad., R. Amazon, Lago Grande (do.)

24. HYDRANASSA TRICOLOR TRICOLOR (P.L.S. Muller)

Type locality: Cayenne

Cajutuba, near Pará (Natterer); Capanema (Snethlage)

1 ♂, R. Amazon, Boca do Igarape Piaba (M. C. Z.)

25. *AGAMIA AGAMI* (Gmelin)

Type locality: Cayenne

Pará (Layard and Snethlage); Monte Alegre (Snethlage); Rio Tapajos (Snethlage)

Specimen A ♂, B ♂, R. Tapajoz, Pinhy (May) (M. C. Z.)

Specimen C ♂ R. Tapajoz, Caxiricatuba (July) (do.)

Specimen D ? R. Tapajoz, Tauary (Oct.) (do.)

Specimen E ♂ R. Tapajoz, Tauary (Nov.) (do.)

Specimen F ♂ R. Tapajoz, Tauary (Aug.) (do.)

G imm. ♂, R. Tapajoz, Pinhy (do.)

H imm. ♂, R. Amazonas, Lago Grande (do.)

I ♀ imm., Santarem (Carnegie Mus.)

Specimens C and E are very much bluer and less green on the back and wing coverts than other adult specimens. It would seem probable that there is an intermediate stage of plumage which is characterized by the green back. A specimen from middle America in the collections of the Museum of Comparative Zoology has new blue feathers molting in on the back, while the greener feathers remaining on the upper back appear to be falling out.

Specimen F has the brown underparts streaked with buff.

26. *NYCTICORAX NYCTICORAX HOACTLI* (Gmelin)

Type locality: Valley of Mexico

Pará; Marajo and Mexiana Islands (all Snethlage)

1 ♂ imm., R. Amazon, Lago Jauary (M. C. Z.)

1 ♀ R. Amazon, Lago Jauary (do.)

27. *NYCTANASSA VIOLACEA CAYENNENSIS* (Gmelin)

Type locality: Cayenne

Marajo Island (Snethlage)

28. *PILHERODIUS PILEATUS* (Boddaert)

Type locality: Cayenne

Mexiana Island (Hagmann and Snethlage); Monte Alegre (Snethlage)

1 imm. ♀, R. Tapajoz, Caxiricatuba (Aug.) (M. C. Z.)

The wings are whiter, not as gray, and the feathers of the neck not as long or as decomposed as the mature bird.

29. *BUTORIDES STRIATUS STRIATUS* (Linne)

Type locality: Surinam

Pará (Stone); Rio Capim (Goeldi); Mexiana Island (Hagmann); numerous localities from Pará to the mouth of the Amazon (Snethlage); Santarem (Chapman and Riker)

A long series from Rio Tapajoz

1 ♂ Santarem (Carnegie Mus.)

30. *TIGRISOMA LINEATUM LINEATUM* (Boddaert)

Type locality: Cayenne

Pará (Layard and Hellmayr); Rio Capim (Goeldi); Mexiana Island (Hagmann) Ilha das Oncas and Marajo Island (Snethlage); Monte Alegre (Snethlage); Santarem (Chapman and Riker)

1 ♂ R. Amazonas, Lago Jauary, Livramento (M. C. Z.)

1 ♂ R. Amazonas, Boca do Igarape Piaba (do..)

1 ♀, Santarem (Carnegie Mus.)

31. *IXOBRYCHUS EXILIS ERYTHROMELAS* (Vieillot)

Type locality: Paraguay

Pará, Marajo Island, Monte Alegre, Cussary (Snethlage)

1 ♂, Santarem (Carnegie Mus.)

32. *ZEBRILUS UNDULATUS* (Gmelin)

Type locality: Cayenne

Pará, Rio Tocantins (Aramatheua), Cussary, Rio Jamundá (Faro), all Snethlage; Santarem (Chapman and Riker), Pará (Pinto)

2 ♂, Obidos; 1 ♂, Santarem (Carnegie Mus.)

33. *BOTAURUS PINNATUS* (Wagler)

Type locality: Bahia

1 ♂, Rio Tapajoz, Tauary (M. C. Z.)

This specimen has the brown streaks on the neck and upper breast somewhat lighter than two specimens from Colombia in this museum.

This rare bittern has never before been recorded from Amazonian Brazil.

Family COCHLEARIIDAE

34. COCHLEARIUS COCHLEARIUS COCHLEARIUS (Linnaeus)

Type locality: Guiana

Rio Capim (Goeldi); Mexiana Island (Hagmann and Snethlage); near Pará (Snethlage-Stone); Marajo Island (Snethlage); Rio Tocantins, Cametá (Snethlage); Utinga and Lago Cuipeua (Pinto)

1 ♂, R. Amazon, Lago Jauary, Livramento (M. C. Z.)

Family CICONIIDAE

35. MYCTERIA AMERICANA Linnaeus

Type locality: northeastern Brazil

Mexiana Island (Hagmann); Marajo Island (Snethlage)

36. EUXENURA GALEATA (Molina)

Type locality: Chile

Mexiana Island (Hagmann); Marajo and Mexiana Islands (Snethlage)

37. JABIRU MYCTERIA (Lichtenstein)

Type locality: Brazil, *ex* Maregrave

Mexiana Island (Wallace and Hagmann); Marajo Island (Snethlage)

Family THRESKIORNITHIDAE

38. THERISTICUS CAUDATUS CAUDATUS (Boddaert)

Type locality: Cayenne

Mexiana Island (Hagmann); Marajo and Mexiana Islands (Snethlage), Lago Cuipeua (Pinto)

39. MESEMBRINIBIS CAYENNENSIS (Gmelin)

Type locality: Cayenne

Mexiana Island (Hagmann and Snethlage); Rio Tapajoz, Goyana (Snethlage)

1 ♀, Rio Acará, Acará (M. C. Z.)

4 ♂ 1 ♀, Rio Tapajoz, Caxiricatuba and Tauary (do.)

40. PHIMOSUS INFUSCATUS NUDIFRONS (Spix)

Type locality: Rio Sao Francisco, Brazil

Rio Inhangapy (sight record by Bond and de Schauensee) Stone, 1928

41. GUARA RUBRA (Linnaeus)

Type locality: Guiana

Cajutuba, near Pará (Natterer); Mexiana Island (Hagmann and Snethlage);
Marajo Island (Hellmayr, Pinto, and Snethlage)

42. AJAIA AJAJA (Linnaeus)

Type locality: South America

Cajutuba, near Pará (Natterer); Mexiana Island (Hagmann); Marajo Island
(Snethlage)

Family PHOENICOPTERIDAE

43. PHOENICOPTERUS RUBER Linnaeus

Type locality: Jamaica

Cajutuba (Natterer); Macapá, 1 ♀ 3 ?, collected by J. de Cavianna (Snethlage)

Family ANHIMIDAE

44. ANHIMA CORNUTA (Linnaeus)

Type locality: Brazil

Rio Maracana, Livramento, and Peixe-Boi (Snethlage); near Pará (Stone, sight
record)

1 ♀, Obidos (Carnegie Mus.)

Family ANATIDAE

45. CAIRINA MOSCHATA (Linnaeus)

Type locality: Brazil

Rio Capim (Goeldi); Mexiana Island (Hagmann); Marajo Island (Snethlage);
Cunany (Snethlage); Santarem (Chapman and Riker)

46. SARKIDIORNIS SYLVICOLA Ihering

Type locality: Brazil

Atlantic coast of Marajo Island and Maguary (Goeldi)

47. *DENDROCYGNA VIDUATA* (Linnaeus)

Type locality: Cartagena, Colombia
 Marajo Island (Goeldi)

48. *DENDROCYGNA BICOLOR BICOLOR* (Vieillot)

Type locality: Paraguay
 Marajo Island (Goeldi and Snethlage); Maguary (Goeldi)

49. *DENDROCYGNA AUTUMNALIS DISCOLOR* Sclater and Salvin

Type locality: Maroni River, Surinam
 Marajo Island (Hellmayr and Snethlage); Mexiana Island (Hagmann); Pará (Pelzeln); Obidos (Hellmayr); Santarem (Chapman and Riker); Lago Cuipeua (Pinto); Caviana Island (Brodkorb)

3 ♂ 3 ♀, Rio Tapajoz, Pinhy and Caxiricatuba (M. C. Z.)

1 ♀, Santarem (Carnegie Mus.)

50. *NEOCHEN JUBATA* (Spix)

Type locality: Rio Solimoes, Brazil
 Mexiana Island (Hagmann)
 1 ♂, Santarem (Carnegie Mus.)

51. *ANAS BRASILIENSIS* Gmelin

Type locality: Brazil
 Pará (Snethlage); Marajo Island (Goeldi and Snethlage)
 1 ♂, Rio Capim, Pará (M. C. Z.)
 2 ♂, Rio Acará, Acará (do.)
 2 ♂, Rio Tapajoz (do.)
 1 ♂, north bank of Amazon near Obidos (do.)
 8 ♂ 1 ♀, Apaçy, Rio Tapajoz (Carnegie Mus.)

52. *ANAS BAHAMENSIS* Linnaeus

Type locality: Bahamas
 Cajutuba, near Pará (Natterer); Marajo Island (Goeldi)

53. *NOMONYX DOMINICUS* (Linnaeus)

Type locality: South America
 Rio Acará (Snethlage)

Family CATHARTIDAE

54. *SARCORHAMPHUS PAPA* (Linnaeus)

Type locality: Brazil

Pará (Goeldi); Rio Maracá (Snethlage); Santarem (Chapman and Riker)

55. *CORAGYPS ATRATUS FOETENS* (Lichtenstein)

Type locality: Paraguay

Pará (Wallace, Layard, Snethlage, Stone); Rio Capim (Goeldi); Mexiana Island (Hagmann)

56. *CATHARTES AURA RUFICOLLIS* Spix

Type locality: Interior of Bahia and Piahy

Pará (Snethlage); Marajo Island (Snethlage); Mexiana Island (Hagmann and Snethlage); Santarem (Chapman and Riker)

1 ♀, Rio Tapajoz, Tauary; 1 ♂ Santarem (Carnegie Mus.)

57. *CATHARTES URUBITINGA* Pelzeln

Type locality: Southern and central Brazil

Rio Capim (Goeldi); Marajo Island (Snethlage); Pará, Rio Guamá and Rio Inhangapy (Stone); Caviana Island (Brodkorb).

Family ACCIPITRIDAE

58. *ELANOIDES FORFICATUS YETAPA* (Vieillot)

Type locality: Paraguay

Pará (Layard and Natterer); Rio Capim (Goeldi); Peixe-Boi and Quati-puru (Snethlage); Mexiana Island (Hagmann); near Santarem (Hellmayr)

59. *ODONTORCHIS PALLIATUS* (Temminck)

Type locality: Southern Bahia

Pará and Marajo Island (Snethlage); Rio Acará (Hellmayr); Santarem (Chapman and Riker, Pinto)

1 ♂ 1 ♀, Rio Tapajoz, Pinhy and Tauary (M. C. Z.)

60. *CHONDROHIERAX UNCINATUS* (Temminck)

Type locality: near Rio

1 ♀, Rio Tapajoz, Tauary (M. C. Z.)

61. *HARPAGUS BIDENTATUS BIDENTATUS* (Latham)

Type locality: Cayenne

Mexiana Island (Hagmann); Pará, Marajo Island, Rio Tocantins, and Rio Tapajoz, (Snethlage); Obidos (Hoffmans); Utinga (Pinto)

1 ♂ 1 ♀, Rio Amazonas, Lago Cuipeuz (adults) (M. C. Z.)

2 ♂ 3 ♀, Rio Tapajoz, Tauary (immature) (do.)

2 ♂ ad. 1 ♂ imm., Obidos (Carnegie Mus.)

1 ♂ imm., Santarem (Carnegie Mus.)

This nicely sexed series shows some color differences between the two sexes when immature. Current descriptions apply to the female primarily. The male is much less marked below, the black streaks, rather than spots, confined to the chest except for fine shaft streaks on the central feathers of breast and abdomen.

62. *HARPAGUS DIODON* (Temminck)

Type locality: "Bresil"

Pará (Hellmayr); Pará and Rio Capim (Goeldi); Santarem (Chapman and Riker)

1 ♂, Apacy, Rio Tapajoz (Carnegie Mus.)

All recent check-lists overlook these records, and restrict the range of this species to eastern and southeastern Brazil.

63. *ICTINIA PLUMBEA* (Gmelin)

Type locality: Cayenne

Pará (Wallace); Peixe-Boi (Hellmayr); San Antonio do Prata (Snethlage); Rio Tocantins, Arumatheua (Snethlage)

64. *ROSTRHAMUS SOCIABILIS SOCIABILIS* (Vieillot)

Type locality: Corrientes

Pará (Stone); Peixe-Boi, Marajo Island, Rio Tocantins (Arumatheua); all Snethlage; Santarem (Chapman and Riker)

1 ♀, Rio Tapajoz, Pinhy (M. C. Z.)

65. *HELICOLESTES HAMATUS* (Temminck)

Type locality: Brazil

Pará (Snethlage)

4 ♂ 1 ♀, Obidos (Carnegie Mus.)

66. *ELANUS LEUCURUS LEUCURUS* (Vieillot)

Type locality: Paraguay
Marajo Island (series, Snethlage)

67. *ACCIPITER BICOLOR BICOLOR* (Vieillot)

Type locality: Cayenne
San Antonio, near Pará (Hellmayr); Bemfica (Steere); Santarem (Chapman and Riker)
1 ♂, Santarem (Carnegie Mus.)

68. *ACCIPITER PECTORALIS* (Bonaparte)

Type locality: Brazil
Pará, 1 ♀ (Snethlage)

69. *ACCIPITER SUPERCILIOSUS SUPERCILIOSUS* (Linnaeus)

Type locality: Surinam
Pará (Natterer and Stone); Benevides and Peixe-Boi (Snethlage)
1 ♀, Rio Tapajoz, Santarem (M. C. Z.)

70. *HETEROSPIZIAS MERIDIONALIS MERIDIONALIS* (Latham)

Type locality: Cayenne
Mexiana Island (Wallace, Hellmayr and Snethlage); Marajo Island (Snethlage); Rio Xingú, Victoria (Snethlage); Santarem (Chapman and Riker)

71. *BUTEO ALBICAUDATUS ALBICAUDATUS* Vieillot

Type locality: Rio de Janeiro
Marajo Island (Snethlage); also by Brodkorb as *colonus* Berlepsch
1 ♂, Rio Tapajoz, Tauary (M. C. Z.)

The two subspecies meet in our area, and perhaps birds will prove to vary individually towards both.

72. *BUTEO ALBONOTATUS ABBREVIATUS* Cabanis

Type locality: Pomeroon River, British Guiana
Marajo Island (Snethlage)

73. *BUTEO BRACHYURUS* Vieillot

Type locality: Cayenne
Pará (Natterer); Nazaré (Layard)

74. BUTEO MAGNIROSTRIS MAGNIROSTRIS (Gmelin)

Pará (Spix, Layard, Stone, Snethlage); Cajutuba (Natterer); Rio Capim (Goeldi); Mexiana Island (Wallace, Hagmann and Snethlage); Marajo Island (Snethlage); Santarem (Chapman and Riker); Obidos (Hellmayr); Caviana Island (Brodkorb)

- 1 ♂ 1 ♀, Rio Tapajoz, Tauary (M. C. Z.)
- 1 ♂, Rio Tapajoz, Caxiricatuba (do.)
- 1 ♀, Rio Amazonas, Lago Cuipeuz (do.)
- 1 ♀, Rio Amazonas, Boca do Igarapé Piaba (do.)
- 2 ♀, Obidos and 1 ♂ 2 ♀, Santarem (Carnegie Mus.)

This series is readily referable to the typical race, but differs from a fine series from Surinam in averaging far more rufescent below, thereby approaching *nattereri* (Sclater and Salvin) to some extent. On geographical grounds this is to be expected, as Hellmayr (Orn. of North-eastern Brazil, p. 460) refers birds from Maranhao and Ceará to *nattereri*.

75. ASTURINA NITIDA NITIDA (Latham)

Type locality: Cayenne

Pará (Natterer, Snethlage, Stone); San Antonio (Hellmayr); Peixe-Boi, Arapiranga and Marajo Island (Snethlage); Santarem (Chapman and Riker); Rio Tapajoz (Pinto)

- 1 ♂ imm., Santarem (Carnegie Mus.)

76. LEUCOPTERNIS ALBICOLLIS ALBICOLLIS (Latham)

Type locality: Cayenne

San Antonio (Hellmayr); Rio Capim and Rio Tocantins (Snethlage); Itaituba (Pinto)

- 1 ♂, Obidos (Carnegie Mus.)

77. LEUCOPTERNIS MELANOPS (Latham)

Type locality: Cayenne

Pará (Natterer)

- 1 ♂, Rio Amazonas, Lago Cuipeuz (M. C. Z.)
- 1 ♂, Obidos (Carnegie Mus.)

78. LEUCOPTERNIS KUHLI Bonaparte

Type locality: Pará

Pará (Natterer and Wallace); San Antonio (Hellmayr); Igarape-Assu (Hellmayr); Peixe-Boi (Snethlage); Rio Tapajoz (Pinto)

- 1 ♀, Villa Braga, Rio Tapajoz (Carnegie Mus.)

79. *LEUCOPTERNIS SCHISTACEA* (Sundevall)

Type locality: Brazil

Rio Capim (Goeldi); Pará, Maracá (Snethlage)

1 ♂, Benevides, Pará (Carnegie Mus.)

80. *HYPOMORPHNUS URUBITINGA URUBITINGA* (Gmelin)

Type locality: Brazil

Rio Capim, Pará (Goeldi); Mexiana Island (Wallace, Hagmann, Snethlage);

Marajo Island, Maracá, Cussary (Snethlage); Santarem (Chapman and Riker, Pinto); Pataua (Pinto)

4 ♂, Rio Tapajoz, Boim and Caxiricatuba (M. C. Z.)

81. *BUTEOGALLUS AEQUINOCTIALIS* (Gmelin)

Type locality: Cayenne

Cajutuba (Natterer); Marajo Island (Snethlage)

82. *BUSARELLUS NIGRICOLLIS NIGRICOLLIS* (Latham)

Type locality: Cayenne

Mexiana Island (Wallace, Hagmann); Marajo Island and Cussary (Snethlage);

Santarem (Chapman and Riker); Obidos (Hellmayr); Urucurituba (Hellmayr); Pará (Stone); Pataua, Lago Cupeua (Pinto)

1 ♀, Lago Grande (M. C. Z.)

83. *HARPIA HARPYJA* (Linnaeus)

Type locality: Mexico

Pará (Natterer); Castanhal (Stone); Peixe-Boi, Rio Guama, Rio Capim, Rio Tapajoz (Snethlage)

84. *SPIZASTUR MELANOLEUCUS* (Vieillot)

Type locality: Guiana

1 ♂, Rio Tapajoz, Tauary (M. C. Z.)

1 ♂, Obidos (Carnegie Mus.)

Apparently the only records for the Amazon Valley.

85. *SPIZAËTUS ORNATUS* (Daudin)

Type locality: Cayenne

Santarem (Natterer, Chapman and Riker)

1 ♂, Rio Tapajoz, Tauary (M. C. Z.)

86. *SPIZAËTUS TYRANNUS* (Wied)

Type locality: Bahia, Brazil

Pará (Layard); Rio Capim (Wallace); Marajo Island and Rio Jamauchim (Snethlage)

1 ♂, Villa Braga, Rio Tapajoz (Carnegie Mus.)

87. *CIRCUS BUFFONI* (Gmelin)

Type locality: Cayenne

Santarem (Natterer); Marajo Island (Snethlage)

88. *GERANOSPIZA CAERULESCENS* (Vieillot)

Type locality: Cayenne

Marajo Island and Rio Cussary (Snethlage); Santarem (Chapman and Riker)

1 ♀, Rio Amazonas, Lago Jauary (M.C.Z.)

1 ♀, Obidos (Carnegie Mus.)

Birds from the south bank may prove referable to *gracilis* (Temminck).

89. *PANDION HALIAËTUS CAROLINENSIS* (Gmelin)

Type locality: Carolina

Marajo Island (Snethlage)

1 ♂, Rio Tapajoz, Santarem, Oct. 17, 1932 (M. C. Z.)

Family FALCONIDAE

90. *HERPETOTHERES CACHINNANS CACHINNANS* (Linnaeus)

Type locality: Surinam

Mexiana Island (Wallace, Hagmann, Snethlage); Marajo Island (Snethlage);

Rio Inhangapy (Stone); Santarem (Natterer); Caviana Island (Brodkorb).

1 ♀, Rio Amazonas, Boca do Igarapé Piaba (M. C. Z.)

1 ♂, Obidos (Carnegie Mus.)

91. *MICRASTUR SEMITORQUATUS SEMITORQUATUS* (Vieillot)

Type locality: Paraguay

Monte Alegre (Snethlage); Santarem (Pinto)

1 ♂ ad., Rio Amazonas, Lago Cuipeuz (M. C. Z.)

1 ♂ imm., Rio Tapajoz, Caxiricatuba (do.)

1 ♀ imm., Rio Tapajoz, Tauary (do.)

1 ♂ imm., Santarem (Carnegie Mus.)

92. *MICRASTUR MIRANDOLLEI MIRANDOLLEI* (Schlegel)

Type locality: Surinam

Pará (Natterer); Rio Guamá, Ourem (Snethlage)

1 ♀, Rio Acará, Villa Acará, fully adult. (M. C. Z.)

1 ♀, Villa Braga, Rio Tapajoz (Carnegie Mus.)

93. *MICRASTUR RUFICOLLIS GILVICOLLIS* (Vieillot)

Type locality: Cayenne

Pará (Natterer, Wallace, Stone); Pará, Rio Xingú (Victoria), Rio Curuá, Rio Jary (Snethlage)

1 ♂, Rio Tapajoz, Tauary (M. C. Z.)

1 ♂, Obidos (Carnegie Mus.)

1 ♂ 1 ♀, Benevides (do.)

2 ♀, Villa Braga, Rio Tapajoz (do.)

94. *DAPTURIUS ATER* Vieillot

Type locality: Brazil

Pará (Wallace); Cussary and Rio Jaumachim (Snethlage); Santarem (Pinto)

3 ♂ 1 ♀, Rio Tapajoz, Caxiricatuba (do.)

1 ♀, Rio Tapajoz, Pinhy

1 ♂, Obidos (Carnegie Mus.)

1 ♂, Santarem (do.)

One of these specimens is immature and represents *Gymnops fasciatus* Spix.

95. *DAPTURIUS AMERICANUS AMERICANUS* (Boddaert)

Type locality: Cayenne

Pará (Wallace, Stone); Rio Capim (Goeldi); Peixe-Boi, Rio Guamá, Rio Moju, Rio Jamauchim (Snethlage)

1 ♂, Obidos (Carnegie Mus.)

1 ♂, Santarem (do.)

96. *MILVAGO CHIMACHIMA CHIMACHIMA* (Vieillot)

Type locality: Paraguay

Rio Capim (Goeldi); Mexiana Island (Wallace, Hagmann); Marajo Island (Snethlage); Santarem (Chapman and Riker)

1 ♀, Rio Tapajoz, Caxiricatuba (M. C. Z.)

1 ♂, Obidos (Carnegie Mus.)

97. *MILVAGO CHIMACHIMA PALUDIVAGUS* Penard

Type locality:

Amapá (Snethlage)

2 ♀, Boca do Igarapé-Piaba, near Obidos

1 ♂, Obidos (Carnegie Mus.)

These birds are really intermediate between the two subspecies. They are decidedly blacker above, like *paludivagus*, but only faintly buffier, less white below. We have no idea to which subspecies specimens from Mexiana and Marajo will prove to belong.

98. *POLYBORUS PLANCUS BRASILIENSIS* (Gmelin)

Type locality: Brazil

Mexiana Island (Wallace, Hagmann); Marajo Island (Snethlage); Santarem (Chapman and Riker); Caviana Island (Brodkorb)

1 ♀ ad., Rio Amazonas, Lago Grande (M. C. Z.)

1 ♂ 1 ♀ imm., Rio Tapajoz, Santarem (do.)

99. *GAMPSOXYX SWAINSONII LEONÁE* Chubb

Type locality: Leon, Nicaragua

Braganza, Monte Alegre, Cussary (Snethlage); Santarem (Chapman and Riker)

4 ♂ 4 ♀, Rio Tapajoz, Santarem (M. C. Z.)

1 ♂ 1 ♀, Obidos (Carnegie Mus.)

2 ♂, Santarem (do.)

This series agrees with a long series from Venezuela, British Guiana and Colombia in averaging more rufescent on thighs, flanks and sides than four birds from southeastern Brazil. The same slight average difference in the series in the American Museum of Natural History induced Miller and Griscom (Amer. Mus. Novit., no. 25, 1921, p. 13 and errata) to recognize two races in 1921 out of the three maintained by Swann at that time. Our series from the eastern Amazon is not typical of northern birds, one or two being practically indistinguishable from Bahia birds, and none as extreme as the most rufescent birds from Venezuela.

100. *FALCO PEREGRINUS ANATUM* Bonaparte

Type locality: New Jersey

Cajutuba, mangrove swamp, March, 1835 (Natterer)

101. *FALCO DEIROLEUCUS* Temminck

Type locality: Santa Catharina, Brazil

Pará (Layard); Marajo Island (Snethlage); Santarem (Chapman and Riker, also Ribeiro)

1 ♀, Santarem (Carnegie Mus.)

102. *FALCO ALBIGULARIS ALBIGULARIS* Daudin

Type locality: Cayenne

Pará (Hellmayr, Stone); Rio Capim (Goeldi); Peixe-Boi, Cunany, Rio Jamauchim (Snethlage); Santarem (Chapman and Riker); Obidos (Hellmayr)

1 ♂ 1 ♀, Rio Tapajoz, Boim and Caxiricatuba (M. C. Z.)

1 ♀, Obidos (Carnegie Mus.)

1 ♂ 1 ♀, Santarem (do.)

1 ♂, Villa Braga, Rio Tapajoz (do.)

It seems to us that *albigularis* Daudin applies definitely to this species.

103. *FALCO FUSCOCAERULESCENS FUSCOCAERULESCENS* Vieillot

Type locality: Paraguay

Mexiana Island (Wallace, Hagmann); Marajo Island (Snethlage)

1 ♀, Rio Tapajoz, Santarem (M. C. Z.)

Family CRACIDAE

[*Nothocrax urumutum* (Spix)]

This genus is characteristic of Upper Amazonia. The only record for our area is Snethlage's "Pará (in the zoological garden)". As Goeldi, however, states that the birds seen by him in the zoological garden at Pará came from the Rio Javary (in uppermost Amazonian Brazil), more satisfactory evidence of the occurrence of this curassow in our area is required.]

104. *MITU MITU* (Linnaeus)

Type locality: northeastern Brazil

Pará (Natterer); Rio Capim (Goeldi); Rio Muraiteua (Stone); Rio Acará (Hellmayr)

2 ♂, Rio Tapajoz, Tauary (M. C. Z.)

1 ♂, Villa Braga, Rio Tapajoz (Carnegie Mus.)

This is the characteristic *Mitu* of the Guiana-Lower Amazonian region. On the Rio Negro northwestward it is replaced by *M. tomentosa* (Spix) and in Amazonian Ecuador by *M. salvini* (Reinhardt).

105. CRAX NIGRA Linnaeus

Type locality: Guiana

Pataua and Cupeua, on the north bank (Pinto)

1 ♂ 1 ♀, Obidos (Carnegie Mus.)

This is apparently the only evidence to show that *nigra* ranges south to the Amazon. For that matter Dr. Oliveira Pinto's record of *fasciolata* from Obidos is also the only evidence of that "species" on the north bank.

106. CRAX FASCIOLATA FASCIOLATA Spix

Type locality: Pará, Brazil

Pará (Spix); Rio Capim (Goeldi); Obidos (Pinto)

107. CRAX PINIMA Pelzeln

Type locality: Pará

Cajutuba (Natterer); Rio Capim (Goeldi)

Far too little is known about these two species of Crax, which are characteristic of Lower Amazonia. They are apparently replaced in upper Amazonia by *C. nigra* Linnaeus and *C. globulosa* Spix. By a remarkable piece of inadvertence the present species is omitted in Snethlage's Aves do Amazonas. She may, however, have thought that *pinima* was a pure synonym of *fasciolata*. Needless to say it is by no means certain that further material and study will endorse the validity of the four "species" here mentioned, or the identifications of some of them in our area.

108. PENELOPE MARAIL (P.L.S. Müller)

Type locality: Cayenne

Rio Jamundá, Faro (Snethlage); near Obidos (Pinto)

1 ♂ 1 ♂ juv., 1 ♀, Obidos (Carnegie Mus.)

Apparently just reaching our area on the north bank of the Amazon. It should be expected elsewhere.

109. *PENELOPE SUPERCILIARIS SUPERCILIARIS* Temminck

Type locality: State of Pará, Brazil

Igarapé-Assu (Robert); Peixe-Boi and Ipitinga (Müller); Rio Capim (Goeldi); Rio Acará; Rio Tocantins, Arumatheua; Rio Tapajoz, Boim (all Snethlage)

5 ♂, 2 ♀, Rio Tapajoz, various localities (M. C. Z.)

1 ♀, Santarem (Carnegie Mus.)

1 ♂, 1 ♀, Villa Braga, Rio Tapajoz (do.)

1 ♂, Miritituba, do. (do.)

This is the characteristic *Penelope* of the south bank of the Amazon, west to the Rio Madeira. It is replaced by other races in central and southern Brazil, Paraguay and northeastern Argentina.

If Neumann's views as to the type locality of true *superciliaris* Temminck prove correct, this subspecies will be known as *pseudonyma* Neumann. (cf. Bull. Brit. Orn. Club, 53, 1933, pp. 93-95.)

110. *PENELOPE PILEATA* Wagler

Type locality: State of Pará, Brazil

Pará (H. Sieber in Berlin Mus., and Natterer, cf. Pelzeln, pp. 283, 340); Monte Christo, Rio Tapajoz (Pinto)

1 ♂ 2 ♀, Rio Tapajoz, Tauary (M. C. Z.)

A little known species, apparently occurring in the same places with the two preceding, as it is recorded from the Rio Madeira and Manaos on the north bank.

111. *ORTALIS MOTMOT MOTMOT* (Linnaeus)

Type locality: Cayenne

Obidos (Hellmayr, Pinto); Rio Maecuru, Monte Alegre (Snethlage)

5 ♂ 2 ♀, north bank of Amazon, Lago Cuipeuz (M. C. Z.)

1 ♂ ad., Obidos (Carnegie Mus.)

112. *ORTALIS MOTMOT RUFICEPS* (Wagler)

Type locality: State of Pará

Santarem (Chapman and Riker); Rio Tapajoz and Foz do Curuá (Pinto)

1 ♂, 3 ♀, Rio Tapajoz, Pinhy

1 ♂, 1 ♀, Rio Tapajoz, Tauary

6 ♂ 1 ♀, Santarem (Carnegie Mus.)

1 ♂, Miritituba, Rio Tapajoz (do.)

This fine series amply validates Peter's reduction of *ruficeps* to a race of *motmot*. A very interesting case, where the Amazon river is the boundary between two distinct subspecies.

113. ORTALIS SPIXI Hellmayr

Type locality: Maranhao, Brazil

Pará, Rio Muria and Cajutuba (Natterer); Castanhal (Stone, sight record); Peixe-Boi and Ipitanga (Hellmayr); Rio Capim (Goeldi); Rio Tocantins, Mazagao (Snethlage)

- 1 ♂, Rio Capim, Resacca
- 1 ♀, Pará, Bosque
- 1 ♂ 1 ♀, Rio Acará, Acará
- 3 ♂ 2 ♀, Benevides (Carnegie Mus.)

While very distinct from *motmot*, it apparently represents it in easternmost Amazonia. Southward this group of the genus is replaced by *O. araucuan* (Spix). Further west we find a different section of the genus altogether, represented by *O. guttata* (Spix).

114. ORTALIS GUTTATA GUTTATA (Spix)

Type locality: Rio Solimoës

- 1 ♂, Rio Tapajoz, Villa Braga (Carnegie Mus.)
- 1 ♂, (do.), Itaituba (do.)
- 2 ♂ 1 ♀, (do.), Apaçy (do.)

A range extension eastward from the Rio Madeira. These birds do not differ from a series from the Rio Solimoës and the Rio Purus.

115. PIPILE PIPILE CUJUBI (Pelzeln)

Type locality: Pará

Pará (Natterer); Igarape-Assu (Hellmayr); Rio Capim (Goeldi); Rio Acará (Snethlage); Santarem (Chapman and Riker); Monte Alegre (Snethlage); Obidos (Pinto)

- 1 ♂, Rio Tapajoz, Miritituba (Carnegie Mus.)
- 1 ♀, (do.), Apaçy (do.), perhaps this species

Records from the north bank of the Amazon might be true *pipile*.

116. PIPILE CUMANENSIS subsp.

Santarem (Chapman and Riker); Rio Jamauchim, Santa Helena (Snethlage)

These records of this poorly known species were made long before any subspecies were proposed, none of which are alleged to occur in our area. The correctness of the identifications is questionable.

Family PHASIANIDAE

117. ODONTOPHORUS GUJANENSIS GUJANENSIS (Gmelin)

Type locality: Cayenne

Pará (Natterer); Rio Capim (Wallace and Goeldi); Igarape-Assu (Hellmayr); Peixe-Boi and Ipitinga (Hellmayr); Santarem (Chapman and Riker); Rio Tocantins, Mazagao; Cussary; Rio Tapajoz, Villa Braga and Boim; Rio Jamauchim, Santa Helena; all Snethlage as *marmoratus* (Gould)

5 ♂ 3 ♀, Rio Tapajoz, Tauary

2 ♀, Obidos (Carnegie Mus.)

4 ♂ 4 ♀, Santarem (do.)

1 ♂ 3 ♀, Rio Tapajoz (do.)

This nice series is topotypical of *rufinus* (Spix), a name revived by Chubb for a lower Amazon subspecies (cf. Ibis, 1919, pp. 25-29). Peters assigned this form a questionable status in vol. 2 of his Check-List, and suggested that the validity of the characters alleged required confirmation. We can report our entire inability to confirm them, or in fact to find any constant differences of any kind, and suggest that Hellmayr in his study of the Spix types was entirely correct in regarding *rufinus* (Spix) as a straight synonym of *gujanensis*.

Family OPISTHOCOMIDAE

118. OPISTHOCOMUS HOAZIN (P.L.S. Muller)

Type locality: Cayenne

Pará (Wallace, Snethlage, Stone); Rio Inhangapy (Stone); Rio Capim (Goeldi); Ilha das Oncas, San Antonio do Prata, Marajo Island (Snethlage, Pinto); Santarem (Chapman and Riker)

2 ♂, Pará, Val-de-Caes

1 ♂, Santarem (Carnegie Mus.)

Family ARAMIDAE

119. ARAMUS SCOLOPACEUS SCOLOPACEUS (Gmelin)

Type locality: Cayenne

Pará (Hellmayr, Snethlage, and Stone); Mexiana Island (Hagmann); Marajo Island (Snethlage)

1 ♂ 1 ♀, Rio Tapajoz, Santarem

1 ♀, Rio Tapajoz, Pinhy

1 ♂, Rio Amazonas, Lago Jauary, Livramento

1 ♀, Rio Amazonas, Lago Grande

1 ♂, Rio Amazonas, Lago Cuipeuz

1 ♂, Santarem (Carnegie Mus.)

Family PSOPHIIDAE

120. *PSOPHIA CREPITANS CREPITANS* (Linnaeus)

Type locality: Cayenne

1 ♀, Lago Cuipeua, Obidos (Pinto)

A considerable southward extension of range, but to have been expected.

121. *PSOPHIA VIRIDIS OBSCURA* Pelzeln

Type locality: Pará

Pará (Natterer and Wallace); Rio Capim (Goeldi); Rio Acará (Hellmayr and Snethlage); Utinga (Conover)

122. *PSOPHIA VIRIDIS INTERJECTA* Griscom and Greenway, 1937

Type locality: Cametá, left bank, Rio Tocantins

1 ♂, the type.

Combining the characters of *obscura* and *viridis*, but geographically intermediate between *obscura* and *dextralis*. All four subspecies are strikingly distinct. It will be of interest to see what *Psophia* turns up on the Rio Xingú.

123. *PSOPHIA VIRIDIS DEXTRALIS* Conover

Type locality: Tauary, right bank of Rio Tapajoz

Rio Tapajos, Tauary and Caxiricatuba (Conover)

2 ♂ 3 ♀, Rio Tapajoz, Tauary and Pinhy

1 ♂, do., Miritituba (Carnegie Mus.)

1 ♂ 1 ♀, Santarem (do.)

Conover records a *Psophia* from the Rio Camaraipi as *dextralis*, but it is obviously a connecting link between *dextralis* and *obscura*. This river is between the Xingú and the Tocantins. If it is not the form here described, it will probably prove to represent still another.

124. *PSOPHIA VIRIDIS VIRIDIS* (Spix)

Type locality: Villa Nuova, Amazons (erroneously)

Left bank of the Rio Tapajoz at Boim (Conover)

1 ♂ 1 ♀, Rio Tapajoz, Villa Braga (Carnegie Mus.)

This form ranges west to the right bank of the Rio Madeira.

Family RALLIDAE

125. RALLUS LONGIROSTRIS subsp.

Marajo Island (Snethlage)

The Clapper Rail from the mouth of the Amazon still awaits sub-specific determination. Typical *longirostris* is known from the Guianas; *crassirostris* Lawrence from southern and central Brazil north to Maranhao.

126. PARDIRALLUS MACULATUS MACULATUS (Boddaert)

Type locality: Cayenne

3 ♀ in the zoological garden at Pará, probably from the environs of the capital (Snethlage); an old skin from the "Amazon River" (British Museum); Pará (Stone)

127. ARAMIDES CAJANEA CAJANEA (P.L.S. Muller)

Type locality: Cayenne

Rio Capim (Goeldi); Mexiana Island (Hagmann and Snethlage); Pará (Graham in Brit. Mus., Snethlage and Stone); Marajo Island (Snethlage); Santarem (Chapman and Riker)

1 ♀, Rio Capim

1 ♂, Rio Acará, Acará

4 ♀, 1 ?, Rio Tapajoz, Pinhy and Tauary

2 ♂ 3 ♀, Santarem (Carnegie Mus.)

1 ♀, Obidos (do.)

1 ♀, do., Goyana Isl. (do.)

We cannot see the slightest reason for recognizing *grahami* Chubb from Lower Amazonia.

128. AMAUROLIMNAS CONCOLOR CASTANEUS (Pucheran)

Type locality: Brazil

Utinga and Santarem (Pinto)

1 ♂, Rio Tapajoz, Boim

1 ♂, Santarem (Carnegie Mus.)

This rare rail has hitherto been unknown between the Guianas and southern Brazil. The male recorded above was so strikingly different from the two currently recognized races that a third subspecies was obviously involved. They are characterized as follows:

1. typical *concolor* (Gosse), 1847. Known only from Jamaica, and apparently extinct. Of relatively large size, of paler coloration, the olives and brown tones predominating over the rufescent. Specimens examined, the type in Brit. Mus., 1 ad. Lawrence Coll. in New York, 2 ad. in Lafresnaye Coll., Mus. Comp. Zool., one badly faded.

2. *guatimalensis* (Lawrence). Very rare and local from Guatemala through Central America to west Ecuador. Much smaller than typical *concolor*, and strikingly darker, more olive less rufescent above, more sooty brown below. Seven specimens including the type examined. One from the Rio Solimoes (Carnegie Mus.) is transitional to the next.

3. *castaneus* (Pucheran). Definitely known only from Amazonian Brazil southward to Bahia, Sao Paulo and Matto Grosso. As large as *concolor*, but strongly rufous and chestnut, instead of olive and brown with a rufescent tinge; strikingly distinct from *concolor*, and appearing a different species when compared with *guatimalensis*. Only two specimens examined.

A word about the nomenclature is in order. *Rallus castaneus* Cuvier is an MS name, based on a definite specimen from Brazil and labelled *castaneus* in Cuvier's handwriting. The name *castaneus* Cuvier has, of course, no nomenclatural status. It was taken up by Lesson, but not properly validated by him, as there is no description. It was, however, validated by Pucheran, (Rev. et Mag. Zool., 1851, p. 279) who gave a detailed description and critique of the "type", which is clearly subspecifically identifiable today. While, therefore, *castaneus* Pucheran (1851) is a synonym of the specific name *concolor* Gosse (1847), it is available for the Brazilian subspecies. *Rufirallus boeckii* Bonaparte (1856) "Bolivia" given by Gray (1871), is clearly a synonym of *castaneus* (Pucheran), but *castaneus* Bonaparte (1856) cannot be definitely allocated, until Guiana specimens are identified subspecifically.

concolor—Wing: type 127, 2ad. 124, 1 ad. (♀ ?) 119; tarsus. 43-46; culmen 25-30.

guatimalensis—Wing: ♂ 118, ♀ 110-113; tarsus, ♂ 41, ♀ 35-39; culmen, 25-27.

castaneus—1 ♂, wing 125, tarsus 46, culmen 26.

128. PORZANA FLAVIVENTER FLAVIVENTER (Boddaert)

Type locality: Cayenne

Rio Guamá, Ourem (Snethlage, 3 ♂ in Goeldi Museum)

129. PORZANA ALBICOLLIS ALBICOLLIS (Vieillot)

Type locality: Paraguay

1 ♂, north bank of Amazon near Obidos, Lago Cuipeuz

One of the many rare Rails, the distribution of which is poorly known. This species is fairly well known in southern and eastern Brazil only. The very distinct *typhoea* Peters from Santa Marta leaves much of eastern South America as a debatable ground. Our specimen, while not typical *albicollis*, is assuredly nearer it than to *typhoea*.

130. LATERALLUS EXILIS EXILIS (Temminck)

Type locality: Cayenne

Pará (Snethlage, Stone); Peixe-Boi (Hellmayr); Utinga (Pinto)

1 ♂ 3 ♀, Rio Tapajoz, Tauary

131. LATERALLUS MELANOPHAIUS LATERALIS (Lichtenstein)

Type locality: Bahia, Brazil

Pará (Stone); Rio Guamá (Layard and Snethlage); Igarape-Assu (Hellmayr)

132. LATERALLUS VIRIDIS VIRIDIS (P.L.S. Muller)

Type locality: Cayenne

Pará (Natterer, Wallace, Snethlage and Stone); San Antonio and Igarape-Assu (Hellmayr); Benevides, Rio Guamá, Cussary (Snethlage); Rio Tapajoz, Boim (Snethlage); Santarem (Chapman and Riker)

1 ♂, Pará, Bosque

4 ♂, 1?, Rio Tapajoz, Tauary

2 ♀, Obidos (Carnegie Mus.)

1 ♂ 2 ♀, Benevides (do.)

2 ♂ 2 ♀, Santarem (do.)

Birds from the south bank of the Amazon are inseparable from a great Cayenne series in the Carnegie Museum.

133. NEOCREX ERYTHROPS ERYTHROPS (Sclater)

Type locality: Lima, Peru

Rio Jamundá, Faro (Snethlage and Pinto)

This rare rail is best known from far upper Amazonia. It is doubtful if any of these birds east of the Andes are typical *erythroops*. They may prove to be *olivascens* Chubb, or a fourth subspecies.

134. *GALLINULA CHLOROPUS GALEATA* (Lichtenstein)

Type locality: Paraguay

Pará (Snethlage and Pinto)

135. *PORPHYRULA MARTINICA* (Linnaeus)

Type locality: Martinique

Pará (Snethlage); Rio Tocantins (Pinto)

1 ♀, Rio Capim, Ipanongo

2 ♂, Rio Acará, Buenos Aires

1 ♂ 1 ♀, Rio Tapajoz, Tauary

1 ♂ 1 ♀, Santarem (Carnegie Mus.)

136. *PORPHYRULA PARVA* (Boddaert)

Type locality: Cayenne

Pará, Monte Alegre, Cussary (Snethlage); Pará (Stone)

1 ♂, Rio Amazonas near Obidos, Lago Cuipeuz

1 ♂ 1 ♀, Santarem (Carnegie Mus.)

Family HELIORNITHIDAE

137. *HELIORNIS FULICA* (Boddaert)

Type locality: Cayenne

Rio Capim (Goeldi); Pará (also Stone), Cussary, Maracá, Monte Alegre (Snethlage); Santarem (Chapman and Riker); Rio Tapajoz and Obidos (Pinto)

6 ♂ 3 ♀, Rio Tapajoz, Pinhy

1 ♂, Rio Tapajoz, Santarem

Family EURYPYGIDAE

138. *EURYPYGA HELIAS HELIAS* (Pallas)

Type locality: Surinam

Cajutuba (Natterer); Rio Capim (Goeldi); Acará (Hellmayr); Mexiana Island (Hagmann); Rio Guamá, Marajo and Mexiana Islands, Monte Alegre (Snethlage)

2 ♂ 1 ♀, Rio Tapajoz, Caxiricatuba

1 ♂, Rio Tapajoz, Santarem

1 ♀, Rio Tapajoz, Pinhy

1 ♂ 3 ♀, Pará, Val-de-Caes

Family JACANIDAE

139. JACANA SPINOSA JACANA (Linnaeus)

Type locality: Surinam

Pará (Layard, Stone); Rio Capim (Goeldi); Mexiana Island (Hagmann); Salvaterra, Marajo Island, Cussary (Snethlage); Santarem (Chapman and Riker); Caviana Island (Brodkorb)

1 ♂ 4 ♀, Rio Tapajoz, Pinhy

3 ♂, 1 ♀, Rio Tapajoz, Caxiricatuba

1 ♀, Obidos (Carnegie Mus.)

1 ♀, Santarem (do.)

2 ♂ ad., 1 ♂ juv. 1 ♀, Rio Tapajoz, Apacy (do.)

Family HAEMATOPODIDAE

140. HAEMATOPUS OSTRALEGUS PALLIATUS (Temminck)

Type locality: Venezuela

Pará (Snethlage); Cajutuba (Natterer)

The Oystercatcher ranges south to southeastern Brazil (Cape Trio, Goeldi; Santa Catharina, Rogers).

Family CHARADRIIDAE

141. BELONOPTERUS CHILENSIS CAYENNENSIS (Gmelin)

Type locality: Cayenne

Pará (Layard); Mexiana Island (Hagmann, Wallace, Snethlage); Marajo Island (Snethlage); Santarem (Chapman and Riker); Caviana Island (Brodkorb)

1 ♂, Rio Tapajoz, Santarem

1 ♂, Rio Amazonas, Lago Grande

1 ♂ 1 ♀, Santarem (Carnegie Mus.)

It is, of course, possible that some of the records below might prove referable to *lampronotus* (Wagler). (cf. Hellmayr, 1909, p. 491).

142. HOPLOXYPTERUS CAYANUS (Latham)

Type locality: Cayenne

Rio Capim (Goeldi); Mexiana Island (Hagmann); Rio Guamá, Rio Tocantins, Rio Tapajoz (Snethlage); Santarem (Hellmayr)

1 ♀, Rio Tapajoz, Pinhel

7 ♂, Rio Tapajoz, left bank (Carnegie Mus.)

143. *PLUVIALIS DOMINICA DOMINICA* (P.L.S. Müller)

Type locality: Hispaniola
Marajo Island (Snethlage)

1 ♂, Rio Tapajoz, Pinhel, May 21, 1933

It is certainly interesting to find this bird in partial breeding plumage in eastern Brazil in late May.

144. *SQUATAROLA SQUATAROLA* (Linnaeus)

Type locality: Sweden
Cajutuba (Natterer)

145. *CHARADRIUS SEMIPALMATUS* Bonaparte

Type locality: New Jersey
Pará (Stone); Cajutuba (Natterer); Mexiana Island (Wallace); Marajo Island (Snethlage)

146. *CHARADRIUS COLLARIS* Vieillot

Type locality: Paraguay
Cajutuba (Natterer); Mexiana Island (Wallace, Hagmann and Snethlage); Marajo Island (Snethlage); Quati-Puru; Rio Tapajoz, Goyana and Boim; Rio Jamundá, Faro (all Snethlage); Santarem (Chapman and Riker)
4 ♂ 1 ♀, Rio Tapajoz, Pinhel and Boim
2 ♂ 1 ♀, Santarem (Carnegie Mus.)

147. *CHARADRIUS WILSONIA WILSONIA* Ord

Type locality: Cape May, New Jersey
Catjutuba and Rio Muria (Natterer)

The occurrence of Wilson's Plover in Brazil seems to have been overlooked in recent years by everyone except Hellmayr. It has been taken as far south as Bahia (Dr. Wucherer in Brit. Mus.). For the reasons for regarding these birds as North American migrants, cf. Hellmayr, 1929, p. 492.

Family SCOLOPACIDAE

148. *BARTRAMIA LONGICAUDA* (Bechstein)

Type locality: North America

1 ♂, Rio Tocantins, Baião (Snethlage)
1 ♀, Santarem, Sept. 15, 1920 (Carnegie Mus.)

149. *NUMENIUS PHAEOPUS HUDSONICUS* (Latham)

Type locality: Hudson Bay

Cajutuba (Natterer); Pará (R. Graham); Marajo Island (Snethlage)

150. *TRINGA FLAVIPES* (Gmelin)

Type locality: New York

Cajutuba (Natterer); Mexiana Island (Wallace and Hagmann); Marajo Island (Snethlage)

4 ♀ 1 ?, Rio Tapajoz, Santarem, Oct. 4-8, 1932

2 ♂ 1 ♀, Santarem, Sept. 16, 1919 (Carnegie Mus.)

151. *TRINGA MELANOLEUCA* (Gmelin)

Type locality: Labrador

Cajutuba (Natterer); Marajo Island (Snethlage); Pará (Graham and Stone)

152. *TRINGA SOLITARIA SOLITARIA* Wilson

Type locality: Pennsylvania

Pará (Graham, Layard, Stone); Peixe-Boi (Hellmayr); Mexiana Island (Wallace); Capanema, Bragança, Rio Guamá, Marajo Island, Rio Tapajoz (Snethlage)

1 ♀, Rio Tapajoz, Tauary, Dec. 1, 1933

1 ♀, Rio Tapajoz, Pinhel, May 18, 1933

1 ♀, Amazon River near Obidos, March 2, 1933

4 ♂ 1 ♀, Santarem, March 26, April 12-17, Aug. 2, 1919 (Carnegie Museum)

1 ♀, Obidos, May 2, 1921 (Carnegie Mus.)

1 ♂, Rio Tapajoz, Feb. 24, 1921

153. *ACTITIS MACULARIA* (Linnaeus)

Type locality: Pennsylvania

Cajutuba (Natterer); Mexiana Island (Wallace); Pará (Graham and Stone); Marajo Island, Cunany (Snethlage); Santarem (Chapman and Riker)

1 ♂, Rio Tapajoz, Pinhy, May 20, 1933

1 ♀, Santarem, Oct. 14, 1919 (Carnegie Mus.)

154. *CATOPTROPHUS SEMIPALMATUS SEMIPALMATUS* (Gmelin)

Type locality: New York

"Single birds, rare, 2 specimens, March, 1835", Cajutuba (Natterer)

This Brazilian record for the Willet has been completely overlooked by recent American authors, and also by Snethlage.

155. *ARENARIA INTERPRES MORINELLA* (Linnaeus)

Type locality: Georgia

Pará and Cajutuba (Natterer, February, March, and April, 1835)

156. *LIMNODROMUS GRISEUS GRISEUS* (Gmelin)

Type locality: New York

Cajutuba, April, 1835, 5 specimens, Cajutuba (Natterer); Marajo Island (Snethlage)

157. *CAPELLA PARAGUAIÆ PARAGUAIÆ* (Vieillot)

Type locality: Paraguay

Pará (Stone, Graham); Bragança, Marajo Island, Monte Alegre (Snethlage); Santarem (Chapman and Riker); Caviana Island (Brodkorb)

1 ♂, Obidos (Carnegie Mus.)

1 ♀, Santarem (do.)

158. *CROCETHIA ALBA* (Pallas)

Type locality: North Sea

Cajutuba, November, 1835 (Natterer)

159. *EREUNETES PUSILLUS* (Linnaeus)

Type locality: Santo Domingo

Cajutuba, March and April, 1835 (Natterer); Mexiana Island (Wallace); Marajo Island (Snethlage)

1 ♂, Rio Tapajoz, Santarem; Nov. 18, 1932

160. *EROLIA MINUTA* (Vieillot)

Type locality: Nova Scotia

Pará (Layard); Mexiana Island (Wallace, Hagmann); Marajo Island (Snethlage)

161. *EROLIA FUSCICOLLIS* (Vieillot)

Type locality: Paraguay

Rio Tocantins (Wallace); Bragança (Snethlage)

1 ♂ 5 ♀, Rio Tapajoz, Pinhel, May 16-19, 1933

162. *EROLIA MELANOTOS* (Vieillot)

Type locality: Paraguay

1 ♂ 2 ♀, Rio Tapajoz, Santarem, Oct. 4, 1932

1 ♂, Rio Amazonas, Lago Grande, Sept. 6, 1932

These are the only records for Lower Amazonia. The species is well known, however, just west and south of our area in Upper Amazonia and Matto Grosso.

Family RECURVIROSTRIDAE

163. *HIMANTOPUS HIMANTOPUS MEXICANUS* (P.L.S. Müller)

Type locality: Mexico

Cajutuba (Natterer); Mexiana Island (Wallace, Hagmann, Snethlage); Marajo Island (Snethlage); Monte Alegre (Snethlage); Santarem (Chapman and Riker); Caviana Island (Brodkorb)

Natterer's specimen was reported by Pelzeln as *melanurus* Vieillot. There is no satisfactory evidence as yet that any Stilt breeds in northern Brazil, or that *melanurus* ranges anywhere nearly so far north as the Amazon Valley.

Burhinus bistriatus vocifer (L'Herminier) is recorded by Snethlage from "Pará (zoological garden)". It is a bird of the savannah regions, Colombia, Venezuela and Guiana, and the nearest definite record to our area is the upper Rio Branco in northwestern Brazil. As a definite locality, Pará in this sense cannot be taken literally.

Family LARIDAE

164. *LARUS ATRICILLA* Linnaeus

Type locality: Bahamas

Cajutuba, Feb. 20, 1835 (Natterer); Marajo Island (Snethlage)

165. *PHAËTUSA SIMPLEX SIMPLEX* (Gmelin)

Type locality: Cayenne

Pará (Layard, Stone); Cajutuba (Natterer); Mexiana Island (Wallace); Quati-puru, Marajo Island, Monte Alegre (Snethlage); Santarem (Chapman and Riker)

1 ♂, 1 ♀, Rio Tapajoz, Tauary and Caxiricatuba

2 ♀, Santarem (Carnegie Mus.)

166. *GEOCHELIDON NILOTICA GRÖNVOLDI* Mathews

Type locality: South America

Marajo Island (Snethlage)

The reported breeding of this species on Mexiana Island goes back to Hagmann. Hellmayr, however, has shown that his identification was erroneous (cf. Hellmayr, 1910, p. 122, footnote 6).

167. *STERNA HIRUNDO* Linnaeus

Type locality: Sweden

Pará, March 3, 1936; Marajo Island, Jan. 3, 1936 (cf. Lincoln, Bird-Banding, Oct., 1936, pp. 146 and 147)

168. *STERNA SUPERCILIARIS* Vieillot

Type locality: Paraguay

Cajutuba (Natterer); Peixe-Boi (Snethlage); Rio Tocantins (Wallace); Pará and Rio Tapajoz (Pinto)

3 ♂ 7 ♀, Rio Tapajoz, Santarem and Pinhel

1 ♀, Obidos (Carnegie Mus.)

1 ♂ 1 ♀, Santarem (do.)

169. *STERNA FUSCATA FUSCATA* Linnaeus

Type locality: Santo Domingo

Mouth of the Amazon (Saunders Coll., in Brit. Mus.)

170. *STERNA ALBIFRONS ANTILLARUM* (Lesson)

Type locality: Guadeloupe

Marajo Island (Snethlage)

171. *THALASSEUS MAXIMUS MAXIMUS* (Boddaert)

Type locality: Cayenne

Pará, 1 ♂ (Snethlage)

172. *THALASSEUS SANDVICENSIS ACUFLAVIDUS* (Cabot)

Type locality: Yucatan

Cajutuba (Natterer); Mexiana Island, breeding (Hagmann)

173. *ANOÛS STOLIDUS STOLIDUS* (Linnaeus)

Type locality: West Indies

"At sea off north Brazil, Oct. (Brit. Mus.)

Family RYNCHOPIDAE

174. *RYNCHOPS NIGRA CINERASCENS* Spix

Type locality: Amazon River

Pará (Stone); Cajutuba (Natterer); Mexiana Island (Wallace); Marajo Island (Snethlage)

1 ♀, Rio Tapajoz, Villa Braga (Carnegie Mus.)

Family COLUMBIDAE

175. *COLUMBA SPECIOSA* GMELIN

Type locality: Cayenne

Pará (Natterer and Wallace); Rio Muraiteua (Stone); Ipitinga and San Antonio (Hellmayr); Rio Capim (Goeldi); Monte Alegre, Cussary, Rio Tapajoz, Rio Jamundá (Snethlage); Santarem (Chapman and Riker, Pinto); Marajo Island (Brodkorb)

1 ♂, Rio Tapajoz, Tauary

1 ♀, Santarem (Carnegie Mus.)

1 ♂, Rio Tapajoz, Villa Braga (do.)

176. *COLUMBA RUFINA RUFINA* Temminck

Type locality: Cayenne

Rio Jamundá, Faro (Snethlage); Caviana Island (Brodkorb)

1 ♂, 1 ♀, Rio Amazonas, Lago Cupeuz

177. *COLUMBA RUFINA SYLVESTRIS* Vieillot

Type locality: Paraguay

Pará (Stone); Mexiana Island (Wallace & Snethlage) Benevides, Marajo Island, Rio Tocantins, Rio Tapajoz (Snethlage); Santarem (Chapman and Riker)

13 ♂ 8 ♀, Rio Tapajoz; various localities, east bank

2 ♂ 1 ♀, Rio Tapajoz, west bank. (Carnegie Mus.)

We entirely agree with Hellmayr that the Amazon River is the boundary between typical *rufina* of the Guianas, and *sylvestris* of northern Argentina northward (cf. Birds of Northeast Brazil, p. 464). No birds from the Amazonian basin are really typical of either, but are variously intermediate. The long series from the Rio Tapajoz has an obviously bicolored tail, but the majority not as sharply contrasted as Argentina and Sao Paulo specimens. Similarly, the two birds from the north bank of the Amazon are much nearer true *rufina*.

178. COLUMBA PLUMBEA WALLACEI Chubb

Type locality: Rio Capim, Pará, Brazil

Rio Capim (Wallace, Goeldi); Pará (Stone); San Antonio and Ipitanga (Hellmayr); Rio Jamauchim, Santa Elena (Snethlage); Santarem (Chapman and Riker).

1 ♀ imm., Obidos (Carnegie Mus.)

2 ♂, 2 ♀, Rio Tapajoz. Villa Braga (do.)

Todd, 1937, has straightened out the great local confusion in these pigeons. Having examined the same material, we fully endorse his main conclusions. The series from the Rio Purus, representing *pallescens* Snethlage, proves the lower Amazon birds to be another subspecies, as Hellmayr long ago suggested. There is, however, the remote possibility that *locutrix* Wied, based on Bahia birds, might prove to belong to the present form. In far upper Amazonia, Zimmer (Birds Peruvian Exped., 1930, p. 256) has resurrected the name *delicata* Berlepsch and Stolzmann for the birds from northern Bolivia to Peru, Ecuador and Colombia, of which *propinqua* Cory and *andicola* Chubb are synonyms. Based on meager material this name would appear to contain two elements, a larger, darker bird from Bolivia, and a smaller, paler one northward, which has yet to be compared with authentic *pallescens*.

179. COLUMBA SUBVINACEA RECONDITA Todd, 1937

Type locality: Colonia do Muju, Santarem, Brazil

Rio Gurupy, Rio Tocantins (Snethlage)

1 ♂ 1 ♀, Obidos (Carnegie Mus.)

1 ♂, Santarem (do.)

1 ♂ 1 ♀, Rio Tapajoz, Villa Braga (do.)

This bird is the *Columba purpureotineta* of Snethlage and Pinto, *nec* Ridgway, a little known subspecies of British Guiana and adjacent

Venezuela, which closely resembles *bogotensis* in color, but differs only in its dwarf dimensions. Wing measurements are appended.

bogotensis—4 ♂ 163–173; 5 ♀ 165–175

recondita—Rio Purus, 3 ♂ 164–170; 3 ♀ 153–156

recondita—Obidos, 1 ♂ 151 ; 1 ♀ 154 (both immature)

recondita—Santarem, 1 ♂ 160

recondita—Rio Tapajoz, 1 ♂ 163; 1 ♀ 155 (immature)

recondita—Rio Tocantins 2 ♂ 155; (*fide* Snethlage)

purpurcotincta 4 ? 146.5–149.5 (*fide* Ridgway)

In both species, *plumbea* and *subrinaeae*, immature specimens are smaller than adults. They are recognizable in having some buffy edgings to the feathers of the mantle and nape, and rusty edgings to the under tailcoverts.

180. ZENAIDA AURICULATA MARAJOENSIS Berlepsch

Type locality: Marajo Island

San João, Pará (Layard); Mexiana Island (Wallace, Hagmann and Snethlage);
Marajo Island (Berlepsch and Snethlage)

181. ZENAIDA AURICULATA JESSIE.E Ridgway

Type locality: Diamantina, Rio Tapajoz

Diamantina (Ridgway); Santarem (Chapman and Riker); Ereré (Snethlage);
Paricatuba (Schulz in Frankfort Museum); Rio Tapajoz (Pinto).

2 ♂ 2 ♀, Santarem (Carnegie Mus.)

For the latest opinion on the races of this species see Naumburg, Amer. Mus. Novit., no. 648, 1933.

182. COLUMBIGALLINA PASSERINA GRISEOLA (Spix)

Type locality: Amazon River

Pará (Layard, Natterer Stone); Bemfica (Steere); Rio Capim (Goeldi); San Antonio (Hellmayr); Santarem (Chapman and Riker); Pará, Quatipuru, Maracá, Monte Alegre, Rio Xingú, Victoria (Snethlage)

8 ♂, 16 ♀ Rio Tapajoz, various localities

4 ♂, Rio Amazonas, Lago Cuipeuz

2 ♀, Rio Amazonas, Boca do Igarapé Piaba

3 ♂ 1 ♀ Obidos (Carnegie Mus.)

3 ♂ 1 ♀ Benevides (do.)

1 ♂ Santarem (do.)

4 ♂ 1 ♀ Rio Tapajoz, both banks (do.)

183. COLUMBIGALLINA TALPACOTI TALPACOTI (Temminck)

Type locality: Brazil

Pará (Natterer); Castanhal (Stone); Nazaré (Layard); Peixe-Boi (Hellmayr); Mexiana Island (Hagmann); Pará (Snethlage); Arumanduba, Ereré, Rio Maecuru (Snethlage); Rio Tocantins, Alcobaça (Snethlage); Rio Tapajoz, Goyana (Snethlage) and Santarem (Chapman and Riker); Marajo Island (Brodkorb)

13 ♂, 8 ♀ Rio Tapajoz, various localities

2 ♂, 3 ♀, Rio Acará, Acará

1 ♂ Obidos (Carnegie Mus.)

1 ♂ Santarem (do.)

8 ♂ 6 ♀, Rio Tapajoz, both banks (do.)

With the greatly increased material in this museum both from Surinam and southern Brazil since Bangs and Penard described *C. arthuri*, we agree absolutely with Hellmayr (Birds Northeast Brazil, p. 468) that matters of individual variation are involved. The present fine series shows this quite graphically. Several birds resemble one from Sao Paulo in having more rufous on the primaries than the type of *arthuri*; perhaps half have some rufous, and the remainder are solid black. It is consequently quite impossible to divide this series into two artificial "species". Twenty-one specimens from the Guianas divide in a similar fashion, so that it seems impossible to recognize *arthuri* even as an intermediate race connecting the Central American *rufipennis*, a mere geographical representative, with *talpacoti*.

184. UROPELIA CAMPESTRIS (Spix)

Type locality: Bahia

Marajo Island (Snethlage)

One of the many characteristic campo birds of central and southern Brazil, which ranges north to this island, but is absent from the forested sections of Lower Amazonia.

185. CLARAVIS PRETIOSA (Ferrari-Perez)

Type locality: Brazil

Rio Maecuru (Snethlage)

1 ♂, Santarem (Carnegie Mus.)

1 ♂, Rio Tapajoz, Villa Braga (do.)

186. LEPTOPTILA VERREAUXI APPROXIMANS Cory

Type locality: Serra de Baturité, Ceará, Brazil

Monte Alegre and Rio Jamundá (Faro); Mexiana and Marajo Islands (all Snethlage); Rio Tapajoz and Santarem (Pinto)

3 ♂ 3 ♀, Rio Tapajoz, various localities

5 ♂ 2 ♀, Rio Amazonas, Lago Cuipeuz

1 ♂, Benevides (Carnegie Mus.)

1 ♂, Santarem (do.)

The characters of this race have been fully discussed by Hellmayr (Birds Northeast Brazil, p. 471), who also shows that the Guiana race must be known as *brasiliensis* Bonaparte. Our series from the north bank of the Amazon is inseparable from the Tapajoz series, showing that *brasiliensis* (= *tenella* Penard, type before us) does *not* extend so far south as the Amazon, in this section at least.

187. LEPTOPTILA RUFAXILLA RUFAXILLA (Richard and Bernard)

Type locality: Cayenne

Obidos and Rio Jamundá, Faro (Snethlage); Mexiana Island (Wallace, Haggmann, Snethlage); Caviana Island (Brodkorb); Pará (Stone); Rio Muria (Natterer); Rio Tapajoz, Mararu, Goyana (Snethlage); Santarem (Chapman and Riker)

2 ♀ Obidos (Carnegie Mus.)

1 ? Santarem (M.C.Z.), 1 ♂ do. (Carnegie Mus.)

3 ♂ ad., 1 ♂ imm., 2 ♀ ad, 1 ♀ imm., Rio Tapajoz, right bank (M.C.Z.)

2 ♂ 2 ♀, Rio Tapajoz, both banks (Carnegie Mus.)

The fine series from Cayenne in the Carnegie Museum proves that lower Amazonian birds are inseparable, and that Dutch and British Guiana specimens, long assumed to represent true *rufaxilla*, are in reality a different subspecies, *hypochroos* Griscom and Greenway.

188. OROPELEIA VIOLACEA VIOLACEA (Temminck and Knip)

Type locality: South America

San Antonio (Hellmayr)

189. *OREOPELEIA MONTANA* (Linnaeus)

Type locality: Jamaica

Pará (Wallace Stone); Rio Capim (Goeldi); Mocajutuba, Ananindeua, Santa Isabel, Benevides, Peixe-Boi (Snethlage); Rio Tocantins (Cametá), Rio Curuá, and Rio Tapajoz, Boim (Snethlage); Obidos (Snethlage); Obidos and Santarem (Pinto)

2 ♂ 2 ♀, Rio Tapajoz, Tauary

1 ♂, Obidos (Carnegis Mus.)

1 ♂, Santarem (do.)

Family PSITTACIDAE

190. *ANODORHYNCHUS HYACINTHINUS HYACINTHINUS* (Latham)

Type locality: none given by Latham; "Brazil" of later authors; we designate Rio Tapajoz, Tauary

Rio Capim (Goeldi); Monte Alegre (Snethlage); Santarem (Chapman and Riker); Rio Tapajoz (Bates in Brit. Mus.)

1 ♂ 1 ♀, Rio Tapajoz, Tauary

The lovely Hyacinthine Macaw has largely been overlooked in recent decades in the lower Amazon valley and has become associated in people's minds with central and southwestern Brazil. The receipt of specimens from the lower Amazon shows that the Matto Grosso bird is quite distinct. Latham's original description was based on a bird in a private museum with no locality. The chances, however, are that a specimen would have reached Europe prior to 1790 from Pará rather than the interior of southern Brazil, and we consequently restrict the type locality on this basis. *Psittacus augustus* Shaw, 1792, no definite locality, is based on a live bird belonging to Lord Orford. By the same reasoning, we restrict this name to "vicinity of Pará, in lower Amazonia." The name of the Matto Grosso race will consequently be *Anodorhynchus hyacinthinus maximiliani* Spix, type collected Oct. 20, 1827, at Rio das Flechas, Matto Grosso. This subspecies is the one generally represented in most collections. The typical form is obviously a brighter blue both above and below, more ultramarine, less purplish, most conspicuous on the underparts; lower mandible 5-8 mm. longer, and width of bill at gape 5 mm. + narrower, the whole bill consequently relatively longer and slenderer. We are indebted to the American Museum in New York for the opportunity of comparing our Tapajoz skins with their fine series from Matto Grosso (5 ♂ 4 ♀).

191. *ARA ARARAUNA* (Linnaeus)

Type locality: Brazil

Mexiana Island (Wallace); Santarem (Allen)

1 ♂, Santarem (Carnegie Mus.)

192. *ARA MACAO* (Linnaeus)

Type locality: Pernambuco

Pará (Natterer); Rio Capim (Goeldi); Mexiana Island (Wallace and Haggmann); Rio Guamá, Ourem; Rio Tocantins, Aramatheua; Rio Jamundá, Faro (the last three, Snethlage); Rio Tocantins (Pinto)

193. *ARA CHLOROPTERA* Gray

Type locality: Guiana

Pará (Natterer); Rio Capim (Goeldi); Santarem (Chapman and Riker); Rio Maracá, Rio Tocantins (Aramatheua), Rio Jamauchim (Snethlage).

1 ♂ 1 ♀, Rio Tapajoz, Tauary and Caxiricatuba

194. *ARA SEVERA* (Linnaeus)

Type locality: Amazon River

Mexiana Island (Hagmann, Snethlage); Santarem (Pinto)

3 ♂, Rio Tapajoz, Santarem

1 ♂, Santarem (Carnegie Mus.)

195. *ARA MARACANA* (Vieillot)

Type locality: Paraguay

Cajutuba (Natterer); Marajo Island (Snethlage); Santarem (Chapman and Riker)

196. *ARA MANILATA* (Boddaert)

Type locality: Cayenne

Monte Alegre, Cussary, Marajo Island (Snethlage); Pataua (Pinto)

1 ♂, Benevides (Carnegie Mus.)

1 ♂ 1 ♀, Santarem (do.)

197. *ARA NOBILIS CUMANENSIS* (Lichtenstein)

Type locality: Brazil-Cuman, Maranhao

Pará (Wallace); Cajutuba (Natterer)

This small Macaw seems to have a range, which is practically identical with that of *Anodorhynchus*. Further north, it is replaced by typical *nobilis*, formerly better known as *hahui* Souancé, which is not known nearer our region than the Rio Branco.

198. ARATINGA GUAROUBA (Gmelin)

Type locality: northeastern Brazil

Pará (Natterer, Wallace Stone); Peixe-Boi (Hellmayr and Snethlage); San Antonio do Prato, Rio Tocantins, Rio Xingú (Snethlage); Rio Tocantins (Pinto)

Outside of our area this conure is known only from the adjacent state of Maranhao.

199. ARATINGA SOLSTITIALIS (Linnaeus)

Type locality: Cayenne

Monte Alegre and Eréré (Snethlage); Santarem (Pinto)

This species replaces the last from the north bank of the Amazon north to the Guianas.

200. ARATINGA LEUCOPHTHALMUS LEUCOPHTHALMUS (P.L.S. Müller)

Type locality: Guiana

Pará and Cajutuba (Natterer); Mexiana Island (Hagmann); Marajo Island, Rio Tocantins, Rio Jamundá (Snethlage); Santarem (Chapman, Riker and Pinto)

4 ♂ 4 ♀, Rio Tapajoz, Santarem

1 ♂ 1 ♀, Obidos (Carnegie Mus.)

2 ♂, Santarem (do.)

A common and widely distributed parakeet, represented by the race *callogenyis* Salvadori in extreme upper Amazonia.

201. ARATINGA AUREA AUREA (Gmelin)

Type locality: Brazil

Pará (Graham); Mexiana Island (Wallace and Hagmann); Caviana Island (Brodkorb); Marajo Island (Hellmayr and Snethlage); Monte Alegre, Eréré, Igarape de Paituna, Rio Jamundá (Snethlage); Santarem (Chapman, Riker and Pinto)

5 ♂ 2 ♀, 1 ?, Rio Tapajoz, Santarem

8 ♂ 3 ♀, Santarem (Carnegie Mus.)

Another common parrakeet in eastern South America, passing in the extreme south into *major* Cherrie and Reichenberger. Unlike *leucophthalmus*, however, it is unrecorded west of the Rio Madeira basin.

202. PYRRHURA PICTA AMAZONUM Hellmayr

Type locality: Obidos

Rio Tocantins, Cussary, Monte Alegre, Rio Tapajos (Snethlage); Obidos (Hellmayr and Snethlage); Santarem (Chapman and Riker, Hellmayr); Obidos and Santarem (Pinto)

3 ♂, 1 ♀, Rio Tapajoz, Caxiricatuba

1 ♂, Rio Tapajoz, Caxiricatuba

10 ♂, 6 ♀, Obidos (Carnegie Mus.)

7 ♂, 6 ♀, Santarem (do.)

This variable species is represented by true *pieta* in the Guianas and Venezuela and by *lucianii* Deville in far upper Amazonia. According to Snethlage, birds from the Rio Madeira are another undescribed race, but Hellmayr doubts this.

[*Pyrrhura melanura* (Spix) is a well known species of upper Amazonia, which is not definitely known east of the Rio Solimoes and the Rio Negro. There is a specimen in the old British Museum collection by Bates from "Tocantins", Amazon River. This "Tocantins" (really Tonantins) must not be confused with the Rio Tocantins in our area.]

203. PYRRHURA PERLATA LEPIDA (Wagler)

Type locality: Amazon River

Pará (Natterer); San Antonio (Hellmayr); Rio Capim (Wallace); Peixe-Boi (Hellmayr); Benevides (Snethlage); Igarape-Assu (Hellmayr); Utinga (Pinto)

204. PYRRHURA PERLATA ANERYTHRA (Neumann)

Type locality: Rio Tocantins, Arumatheua

from type station, 2 ♂ (Neumann); Cametá, 1 ♂ (Sieber in Berlin Museum)

Only known from the specimens listed above. Prof. Neumann's revision (Verh. Orn. Ges. Bayern, 17, no. 4, 1927) shows that typical *perlata* (Spix) is only known from the two cage-bird types, which may be a mere cage variety, as suggested by Hellmayr.

205. *PYRRHURA RHODOGASTER* Selater

Type locality: Borba, Rio Madeira

1 ♂, Rio Jamauchim (Snethlage); 1 ♀, Rio Arapiuns (Pinto)

1 ♂, Rio Tapajoz, Boim

2 ♂ 1 ♀, Rio Tapajoz, Apaçy (Carnegie Mus.)

This rare parrot is only known from the localities mentioned above.

206. *FORPUS MODESTUS MODESTUS* Cabanis

Type locality: British Guiana

1 ♀ imm., Rio Tapajoz, Aveiros (Carnegie Mus.)

This bird agrees with a series from the Rio Purus of this very dark species with the blackish upper mandible. We have, however, no typical material.

207. *FORPUS PASSERINUS* subsp.

Pará, Rio Jamauchim, Recreio and Porto Seguro (Snethlage)

There is still some uncertainty about *Forpus* in Lower Amazonia. Snethlage is the only person who has seen a series from Pará. These birds she distinguishes from *deliciosus* Ridgway (Santarem), in that adult males have bright ultramarine blue rumps and a lot of yellow on the forehead and sides of the head. She calls these birds *modestus* Cabanis, but it would appear certain that she did not understand that species. Her description leads one to infer that her birds will turn out to be *flavissimus* Hellmayr (Maranhao). Stone records a single female from Pará as *modestus* also.

208. *FORPUS PASSERINUS DELICIOSUS* (Ridgway)

Type locality: Diamantina Creek, near Santarem

Santarem (Chapman and Riker, Snethlage); Monte Alegre, Igarapé de Paituna, Rio Jamundá (Snethlage); Obidos (Hellmayr and Pinto)

5 ♂ 3 ♀, north bank of Amazon near Obidos and south bank, Lago Grande

1 ♀, Rio Tapajoz, Tauary

2 ♂, Obidos (Carnegie Mus.)

12 ♂ 13 ♀, Santarem (do.)

209. BROTOGERIS VERSICOLURUS VERSICOLURUS (P.L.S. Müller)

Type locality: Cayenne

Pará (Natterer Stone); Benevides (Steere); Rio Inhangapy, Rio Guamá (Stone); Mexiana Island (Wallace, Hagmann, Hellmayr); Marajo Island (Hellmayr, Snethlage); Ilha das Oncas, Serra de Paituna, Rio Jamundá, Rio Tocantins (Snethlage); Santarem (Chapman and Riker, Hellmayr)

3 ♀, Pará, Val-de-Caes

1 ♀, Rio Tapajoz, Pinhel

2 ♀, Lago Grande

2 ♂ 1 ♀, Obidos (Carnegie Mus.)

8 ♂ 5 ♀, Santarem (do.)

1 ♂ 1 ♀, Rio Tapajoz (do.)

210. BROTOGERIS CHRYSOPTERUS TUIPARA (Gmelin)

Type locality: northeastern Brazil

Pará (Layard, Natterer, Wallace Stone); Ourem (Stone); Igarape-Assu (Hellmayr); Rio Capim (Goeldi); Peixe-Boi and Ipitinga (Hellmayr); Ilha das Oncas, Rio Barcarena, Marapanim, San Antonio do Prata, Providencia, Rio Tocantins (all Snethlage); Santarem (Chapman and Riker); Marajo Island (Brodkorb)

5 ♂ 5 ♀, Pará, Val-de-Caes and Bosque

7 ♂ 4 ♀, Rio Tapajoz, Tauary and Caxiricatuba

7 ♂ 2 ♀, Santarem (Carnegie Mus.)

1 ♂ 1 ♀, Benevides (do.)

211. BROTOGERIS CHRYSOPTERUS CHRYSOPTERUS (Linnaeus)

Type locality: Guiana

Rio Jary, San Antonio da Cachoeira, and Monte Alegre (Snethlage); Obidos (Pinto)

3 ♂ 1 ♀, Obidos (Carnegie Mus.)

These two subspecies represent each other on the south and north banks of the Amazon. They are replaced by *chrysonema* on the Rio Madeira.

212. BROTOGERYS ST. THOMAE TAKATSUKASAE (Neumann)

Type locality: north bank of the Amazon opposite Santarem

Monte Alegre (Snethlage, Neumann); Maracá (Snethlage)

6 ♂ 4 ♀, north bank of Amazon near Obidos

1 ♀, Rio Tapajoz, Santarem

2 ♂ 1 ♀, Obidos (Carnegie Mus.)

13 ♂ 12 ♀, Santarem (do.)

Typical *st. thomae* ranges east to the Rio Madeira. We confirm Neumann's color characters. Specimens seen by us from eastern Ecuador in this museum and New York are radically larger than our lower Amazonian series.

213. AMAZONA FARINOSA FARINOSA (Boddaert)

Type locality: Cayenne

Pará (Natterer); Castanhal (Stone); Peixe-Boi (Hellmayr and Snethlage); Rio Capim (Goeldi); Mexiana Island (Hagmann); Rio Jamauchim (Snethlage); Obidos and Pará (Pinto)

- 8 ♂ 2 ♀, Rio Tapajoz, Tauary
- 2 ♀, north bank of Amazon near Obidos
- 1 ♂, Obidos (Carnegie Mus.)
- 1 ♂ 1 ♀, Santarem (do.)
- 1 ♂, Rio Tapajoz (do.)

214. AMAZONA AMAZONICA AMAZONICA (Linnaeus)

Type locality: Surinam in error—"les pays des Amazones"

Cajutuba (Natterer); Rio Capim (Goeldi); Mexiana Island (Hagmann); Ilha das Oncas, Marajo Island, Amapá, Rio Jamauchim (Snethlage)

- 1 ♂, Pará, Val-de-Caes
- 1 ♀, imm., Rio Tapajoz, Villa Braga (Carnegie Mus.)

A very widely ranging species represented by *micra* Griscom and Greenway on the Surinam coast, which may prove to have a wider distribution.

[*Amazona aestiva aestiva* (Linnaeus) is listed in Snethlage's Aves do Amazonas on the basis of specimens in the zoological garden at Pará. It is not known north of Pernambuco, and Pará cannot be regarded as a definite locality for this species.]

215. AMAZONA OCHROCEPHALA subsp.

Santarem (Chapman and Riker); Caxiricatuba, Rio Tapajoz (Pinto)

- 1 ♀, Obidos (Carnegie Mus.)
- 1 ♀, Santarem (do.)

216. AMAZONA OCHROCEPHALA XANTHOLAEMA Berlepsch

Type locality: Marajo Island

Marajo Island (Berlepsch and Snethlage)

The status of this species in Lower Amazonia still remains to be determined. Snethlage was about to describe this race, as a new

species, apparently referring all Brazilian records and those from "neighboring countries to the north" to it. The species was collected by Natterer on the Rio Branco; apparently the Santarem record given above is the only basis for the occurrence of the species between northwestern Amazonia and Marajo Island. The relationship of alleged *ochrocephala* from the south bank of the Amazon to *nattereri* from the Rio Madeira should also be investigated.

217. *AMAZONA FESTIVA FESTIVA* (Linnæus)

Type locality: Guiana

Pará (Graham in Brit. Mus.); Mexiana Island (Hagmann and Snethlage); Monte Alegre (Snethlage); Santarem (Chapman and Riker); Lago Pataua and Lago Cuipeua (Pinto)

3 ♂ 5 ♀, north bank of Amazon near Obidos

1 ?, Rio Tapajoz, Santarem.

1 ♂ 1 ♀, Obidos (Carnegie Mus.)

1 ♂ 1 ♀, Santarem (do.)

One of these birds is *chloronota* Souancé in having a green rump and red at the bases of the outer tail feathers; another has the red in the tail, but a crimson rump; two others have a few red feathers in an otherwise green rump. It will be apparent, therefore, that we have here either an age or a mutational variation so common in these parrots; not only is *chloronota* not a distinct species, but it seems to us to have no status as a subspecies either (see Cory, Cat Birds Amer., pt. 1, 1918, p. 88).

218. *GRAYDIDASCULUS BRACHYURUS INSULSUS*

(Griscom & Greenway, 1937)

Type locality: Lago Grande, south bank of Amazon

Pará (Hellmayr); Amapa, Monte Alegre, Rio Jamunda (Snethlage); Santarem (Chapman & Riker); Pataua (Pinto)

1 ♂, Rio Tapajoz, Santarem

1 ♂, 2 ♀ 1 ?, north bank of Amazon near Obidos

4 ♂, 2 ♀ south bank, Rio Amazonas, Lago Grande

1 ♂ 4 ♀, Obidos (Carnegie Mus.)

11 ♂ 6 ♀, Santarem (do.)

Typical *brachyurus* is a much larger bird of Upper Amazonia, with a proportionately smaller and weaker bill.

219. *PIONUS MENSTRUUS MENSTRUUS* (Linnæus)

Type locality: Surinam

Cajutuba (Natterer); Igarape-Assu (Robert); Ilha das Oncas, Benevides, Santa Antonio do Prata, Peixe-Boi, Rio Acara, Rio Tocantins (Snethlage); Santarem (Chapman and Riker); Maraca, Obidos, Rio Jamunda, Campos de Ariramba (Snethlage)

5 ♂, 3 ♀, 1 ?, Rio Tapajoz, Pinhy, Tauary, Boim

1 ♂ 1 ♀, Rio Tapajoz, Villa Braga (Carnegie Mus.)

1 ♂ 1 ♀, Obidos (do.)

1 ♂ 3 ♀, Santarem (do.)

220. *PIONUS FUSCUS* (P.L.S. Müller)

Type locality: Cayenne

Pará (Natterer and Wallace); Rio Capim (Goeldi); Igarape-Assu and Ipitinga (Hellmayr); Mocajutuba, Providencia, Benevides, Peixe-Boi, Rio Acara, Rio Tocantins (Snethlage); Santarem (Chapman and Riker)

2 ♂ 2 ♀, Rio Tapajoz, Tauary

1 ♀, north bank of Amazon near Obidos

2 ♂, Obidos (do.)

1 ♂ 2 ♀, Santarem (do.)

2 ♂ 3 ♀, Rio Tapajoz, various localities (Carnegie Mus.)

221. *DEROPTYUS ACCIPITRINUS ACCIPITRINUS* (Linnæus)

Type locality: Cayenne by subsequent designation Maraca and Obidos (Snethlage)

1 ♂, north bank of Amazon near Obidos

1 ♂ 3 ♀, Obidos (Carnegie Mus.)

222. *DEROPTYUS ACCIPITRINUS FUSCIFRONS* Hellmayr

Type locality: Rio Acara, Igarape-Assu

Pará (Natterer, Stone); Benevides (Steere); Igarape-Assu and Peixe-Boi (Hellmayr); Rio Capim (Goeldi); Rio Jãmãuchim (Snethlage)

1 ♂, Rio Acara, Acara

1 ♀, Rio Tapajoz, Tauary

1 ♀, Benevides (Carnegie Mus.)

1 ♂ 1 ♀, Rio Tapajoz, Miritituba (do.)

These two very distinct races are supposed to replace each other on the two sides of the main Amazon. According to Hellmayr, the present subspecies ranges westward for an undetermined distance. In Brazil there are apparently no definite records west of the Rio Tapajoz, but a

specimen in the British Museum from Sarayacu, east Ecuador is *fuscifrons*. Hellmayr regarded this locality as "very doubtful", and Chapman does not record the genus from Ecuador. Pinto claims that two specimens from Santarem are obviously the northern race!

223. PIONOPSITTA CAICA (Latham)

Type locality: Cayenne

2 ♂, 1 ♀, Rio Jamunda, Faro (Snethlage); Rio Atabany (Pinto)

1 ♀, Obidos (Carnegie Mus.)

These are the only records for this common Guiana species in our area. Another member of the genus, *barrabandi* (Kuhl), just reaches extreme northwestern Brazil, and one of the tributaries of the Rio Madeira.

224. GYPOPSITTA VULTURINA (Kuhl)

Type locality: Brazil

Pará (Wallace, Stone); Castanhal, Rio Gurupy (Stone); Igarape-Assu and Peixe-Boi (Hellmayr); Rio Capim (Goeldi); Providencia, St. Antonio do Prata, Rio Moju, Rio Tocantins, Rio Tapajoz (Snethlage)

1 ♂, Rio Acara, Acara

1 ♂, Benevides (Carnegie Mus.)

6 ♂ 4 ♀, Santarem (do.)

1 ♀, Rio Tapajoz, Villa Braga (do.)

This genus is practically endemic in our area, but on the south bank of the Amazon only. Westward it ranges to the right bank of the Rio Madeira. In coloration it so exactly resembles *Pionopsitta barrabandi* as to raise the presumption that the two birds are representative forms, with perfectly complementary ranges. We know of no better illustration in tropical American parrots to endorse the suspicion that undue weight has been given to striking color differences, and that there are far too many "species" and "genera."

225. TOUIT PURPURATA PURPURATA (Gmelin)

Type locality: Cayenne

Pará (Natterer and Snethlage); Rio Capim (Wallace); Ipitinga (Hellmayr)

1 ♂, Benevides (Carnegie Mus.)

Touit hueti (Temminck). Type locality: Peru. Pará (Snethlage).

This is a species of far upper Amazonia, and there is no other definite record for Brazil. The genus is exceedingly difficult to collect and is easily overlooked, but Snethlage's locality "Pará" would certainly seem to need confirmation. Pinto (1937) probably correctly omits this species from the Brazil list.

226. PIONITES MELANOCEPHALA MELANOCEPHALA (Linnæus)

Type locality: Cayenne

Maraca and Obidos, north side of the Amazon (Snethlage, Pinto)

3 ♂ 4 ♀, Obidos (Carnegie Mus.)

227. PIONITES LEUCOGASTER LEUCOGASTER (Kuhl)

Type locality: Brazil

Pará (Natterer); Rio Muraiteua, Utinga (Stone); Igarape-Assu, San Antonio do Prata, Peize-Boi (Hellmayr); Providencia and Rio Acara (Snethlage)

1 ♀, Pará, Bosque

1 ♂, Santarem (Carnegie Mus.)

This species is replaced by *xanthurus* Todd on the Rio Purus, and by *xanthomerius* (Sclater) in extreme upper Amazonia east to the Rio Solimoes. Hellmayr's record (1910) of *leucogaster xanthomerius* from the Rio Madeira probably belongs to *xanthurus* Todd. All are sub-species, and it is more than likely that all three should be regarded as representative forms of *melanocephala*. We have examined the series in the Carnegie Museum, and note that no mention of *xanthurus* is made in Peter's Check-List, (vol. 3) or in Pinto's Catalogue.

Family CUCULIDAE

228. COCCYZUS MINOR MINOR (Gmelin)

Type locality: Cayenne

Cajutuba (Natterer)

The most southern record for this species. It should be sought along the coast, and a Brazilian series should be compared with Guiana topotypes.

229. *COCCYZUS MELACORYPHUS* Vieillot

Type locality: Paraguay

Pará, Rio Tocantins, Rio Xingú, Monte Alegre, Ereré, Rio Maecuru, Rio Jamundá (Faro.)

4 ♂ 2 ♀, Rio Tapajoz, Santarem.

4 ♂ 4 ♀, Santarem (Carnegie Mus.)

230. *COCCYZUS EULERI* (Cabanis)

Type locality: Cantagallo, southeast Brazil

Santarem (Chapman and Riker); Pará (Snethlage)

1 ♂, Rio Tapajoz, Santarem

1 ♀, Santarem (Carnegie Mus.)

There is still considerable uncertainty regarding the status and proper name of this species. There is no doubt that *C. euleri* Cabanis is definitely a rare cuckoo of Argentina and southern Brazil, ranging north to the south bank of the Amazon, perhaps as a winter visitor only. What we do not know is its relationship to *C. americanus*, of which it may be only a representative form. Ridgway inclined to this view, and believed that the type of *C. julieni* Lawrence, from Sombrero Key, Lesser Antilles, was an earlier name for *euleri*, and that the breeding bird of the West Indies was probably the same thing. There are two difficulties involved. In the first place breeding adults from Santo Domingo are not separable from typical *americanus*. In the second place the type of *julieni* was a fall migrant only on Sombrero, a barren rock with a lighthouse. It follows that *julieni* can only be a migrating individual of *americanus*, and the senior author, who is familiar with Lawrence's type, regards it as an immature *americanus* of minimum size, and certainly not *euleri* of southern Brazil. We consequently endorse Hellmayr's recent contention (1929, p. 432), not to call *euleri*, *americanus julieni*. We have examined the type of *lindeni* Allen from Santarem, which is certainly a synonym of *euleri*. Some Cuckoo, either *americanus* or *euleri*, is recorded from the Guianas and Trinidad, though there are no specimens on record in America. They will almost surely prove to be *euleri* as a winter visitant, or the West Indian breeding stock of *americanus*, which is as yet unknown definitely east of Venezuela. Snethlage's record of *C. americanus* from Pará presumably belongs here.

231. *PIAYA CAYANA CAYANA* (Linnæus)

Type locality: Cayenne

- 1 ♀, Pará, Bosque
- 2 ♀, Rio Acará, Acará
- 7 ♂ 4 ♀, Rio Tapajoz, various localities east bank
- 1 ♀, Obidos (Carnegie Mus.)
- 2 ♂, Benevides (do.)
- 3 ♂ 2 ♀, Santarem (do.)
- 2 ♂ 3 ♀, Rio Tapajoz (do.)

The identity of the squirrel cuckoos of Lower Amazonia has been left in abeyance for some years, due to the inability of any student to compare a topotypical series of *obscura* Snethlage from the Rio Purus with adequate material from any other part of Amazonia. Thus various museums, lacking a Rio Purus series, have referred specimens from the Rio Madeira to *obscura* on geographic grounds, and on the other hand have acted similarly with birds from northeastern Peru. The latest comment on Lower Amazon birds is that of Hellmayr (1929, p. 434), who showed that Pará birds were a different subspecies from any in Brazil just south of the Amazon valley, and intermediate between *pallescens* Cabanis and Heine and *obscura* Snethlage to which he assigned all birds from the Rio Madeira to eastern Peru. These birds have just been named *hellmayri* by Pinto (1938).

We have before us a nice series of topotypes of *obscura* from the Rio Purus. It turns out that *obscura* of recent authors, *nec* Snethlage, is a composite of two races. Rio Madeira birds in the American Museum are *obscura*, but specimens in New York and Chicago from eastern and northeastern Peru are not *obscura*, immediately separable in being much darker below, and constitute a connecting link between *obscura* and *boliviana* Stone. Whether these birds have sufficient geographic range and clear cut characters to merit the description of still another subspecies must be left to Mr. Zimmer, who alone has adequate material at his command. But our impression of very inadequate material is that it is as distinct a race as many another now currently recognized.

We may now return to the identity of Lower Amazonian birds. With the darker Peruvian element extracted from our concept of *obscura*, we see no necessity for describing a lower Amazonian race. Birds from Pará and the Rio Tapajoz are clearly distinct from *pallescens*, but they are not clearly distinct from *obscura*. Perhaps one in four specimens approaches *pallescens* either in paler upper parts, paler throat, or paler gray ventral surface, but it will be apparent that lower Amazonian birds have no color character of their own, and are very much

nearer *obscura* on the average than anything else. There is a slight tendency for tail length to increase as the westward limits of the range are approached, but the difference between the extremes of the two series is less than half the difference between extreme individuals in either series.

Rio Purus ♂ 280-294; ♀ 243-278

Rio Tapajoz ♂ 271-290, the majority below 280 mm.; ♀ 245-265

Pará region ♀ 256-270

The character used by Madame Snethlage to distinguish her 3 specimens of *obscura* from Pará specimens of what she called *P. cayana* (Linnæus) was the much darker color of the under tail-coverts. This is apparently a matter of individual variation. One Rio Purus bird is indeed quite the darkest of all Amazonian specimens seen. Five others, slightly paler, are identical with ten more eastern specimens. One is still paler and agrees with four more eastern specimens. It is interesting to note that the darkness of coloration of the thighs and under tailcoverts does not vary proportionately with the relative darkness or paleness of the abdomen. We have no hesitation, therefore, in referring all birds from the south side of the Amazon from the Rio Purus eastward to *obscura* Snethlage.

It now remains to determine the relations between *obscura* and true *cayana* from Cayenne. A very fine series in the Carnegie Museum from French Guiana is at hand, which gives an adequate idea of the considerable individual variation that occurs. It seems to us impossible to separate *obscura*. Half the series differ from the majority of true *cayana* in having minutely darker under tailcoverts. There are no other color differences whatever, and there proves to be no difference in tail length. This seems to us to be far too slight a character for nomenclatural recognition. The birds of Lower Amazonia can all be referred to typical *cayana*, it being understood that eastward an increasing percentage of specimens approach *pallascens* in one or another characteristic.

We give no locality records, as this abundant bird has been obtained in every part of our area by all collectors, with the single exception of Marajo Island.

232. PIAYA MELANOGASTER MELANOGASTER (Vieillot)

Type locality: Cayenne, by subsequent designation

2 ♂ 1 ♀, Obidos (Carnegie Mus.)

3 ♀, Rio Tapajoz, Villa Broga (do.)

Not previously recorded east of the Rio Madeira. The Obidos birds agree perfectly with a fine series from Cayenne. Those from the Tapajoz and a fine series from the Rio Purus and Rio Solimoes do not appear to differ constantly in color characters, but the bills are much darker, apparently more red, less orange or yellow in life.

233. *COC CYCUA MINUTA MINUTA* (Vieillot)

Type locality: Cayenne

Pará (Layard, Wallace, Stone); Utinga (Hellmayr); Mexiana Island (Hagmann and Hellmayr); Marajo Island, Cussary, Rio Jary, Monte Alegre, Rio Jamundá (Snethlage); Santarem (Chapman and Riker, Hellmayr); Rio Cunany (Pinto)

- 1 ♀, Rio Amazonas, north bank near Obidos
- 1 ♂ 1 ♀, Obidos (Carnegie Mus.)
- 1 ♀, Benevides (do.)
- 3 ♀, Santarem (do.)
- 1 ♂ 2 ♀, Rio Tapajoz, various localities (do.)

Birds from the Lower Amazon are not separable from a fine series from Cayenne in the Carnegie Museum.

234. *TAPERA NAEVIA NAEVIA* (Linnæus)

Type locality: Cayenne

Pará (Layard Stone); Igarape-Assu (Hellmayr); Castanhal (Stone); Mexiana Island (Hagmann, Hellmayr, Wallace); Marajo Island, Quati-Puru, St. Antonio do Prata, Maracá, Monte Alegre (Snethlage)

- 1 ♂ 1 ♀, Rio Tapajoz, Santarem
- 3 ♂ 2 ♀, Obidos (Carnegie Mus.)
- 1 ♂ 1 ♀, Benevides (do.)
- 1 ♂, Santarem (do.)
- 1 ♂, Rio Tapajoz, Itaituba (do.)

235. *NEOMORPHUS GEOFFROYI GEOFFROYI* (Temminck)

Type locality: Brazil

Pará (Natterer and Snethlage); Igarape-Assu and St. Antonio do Prata (Hellmayr); Rio Capim (Goeldi); Cussary (Snethlage)

According to Temminck's account in the Planches Col., his description was based on birds in two private collections and on specimens in the museums of Paris, Berlin, Vienna and Leyden (given in the order mentioned). As one of the private collections was that of Prince Neuwied, Temminck obviously had Bahia as well as Amazonian

specimens. As the Bahia bird has been described as *dulcis* Snethlage, 1927, the question arises which of the two subspecies involved should actually be typical *gcoffroyi*. In 1905, (p. 298) Hellmayr designated Bahia ex Wied as a restricted type locality, but in 1929, (p. 436), after the description of *dulcis* by Snethlage, suggested that the application of Temminck's name should await "the examination of the type in Leyden." There being no holotype, and Leyden being the last of the numerous listed collections to be mentioned, we can see no reason for applying the name on the basis of a specimen in the Leyden Museum. As a matter of fact we have before us an Amazon specimen of *gcoffroyi* and an example of *dulcis* Snethlage from the interior of Bahia. They are very different subspecies, and Temminck's detailed description and excellent colored plate apply very definitely to the bird from around Pará, which has long been known as *gcoffroyi*. We suggest Pará, therefore, as a restricted type locality and as a probable source of many of the older skins in the great collections. We might add that all detailed descriptions of *gcoffroyi* in the literature, based on Pará birds, agree with Temminck's original description and plate in all the respects, which we now know to be of subspecific importance.

236. NEOMORPHUS SQUAMIGER SQUAMIGER Todd

Type locality: Colonia do Mojuy, Santarem, Brazil

Previously known only from the four specimens in the type series in the Carnegie Museum, examined by us

1 ♂ 1 ? (both adult), Rio Tapajoz, Tauary (right bank)

The rarity of the Cuckoos of this genus is readily seen by the fact that Klages, the discoverer of *squamiger*, "sought for it in vain along the Tapajoz." Further comments on this form will be found under the next.

237. NEOMORPHUS SQUAMIGER IUNGENS subsp. nov.

Type.—No. 173564, Mus. Comp. Zool.; ♀ ad.; Boim, left bank of the Rio Tapajoz, Pará, Brazil; Jan. 10, 1933; A.M. Olalla

Characters. Differing from *squamiger* in having the feathers of forehead and pileum buffy brown tipped with dull bluish and with bluish centers; mantle slightly more bronzy green; secondaries greener, less coppery red; auricular region much deeper cinnamon buff; chin and throat uniform rich buff, instead of soiled whitish or grayish; dark subterminal area of breast feathers less extensive; narrow pectoral

collar much more distinct. Differing from *lepidophanes* in the buffy forehead and pileum; secondaries bronzy green, not coppery red; chin and throat buffier, less white; breast squamated, and much narrower pectoral collar.

In Todd's original description of his two supposed species (Proc. Biol. Sec. Wash., **38**, 1925, p. 112), *lepidophanes* was compared with *pucherani* Deville, but *squamiger* was not compared with any member of the genus. His only comment was that *squamiger* was unique in the restriction of the bare area on the side of the head. Our birds, however, show that this is an age or individual variation, as they have just as big a bare orbital space as *geoffroyi* and bigger than several specimens of *salvini*.

Many years ago (1910) Hellmayr predicted that *geoffroyi*, *pucherani* and *salvini* would probably turn out to be representative forms. The discoveries of recent years amply support his contention. These rare terrestrial cuckoos are an old group of undoubted Old World origin, which have probably occupied their present ranges for a very long time. We now have definite evidence that, like the Trumpeters, the larger rivers are barriers they will not cross, and we find very different birds on opposite banks of these rivers. Our prediction is, therefore, that still other races of these cuckoos remain to be discovered, and that they will turn out still more closely to connect birds currently regarded as specifically distinct.

At the present state of our definite knowledge, it must be admitted that at first sight *geoffroyi* and *squamiger* appear very different. However, it should be noted that some at least of the *geoffroyi* characters reappear in other races further west. In particular, *ungens* is in general coloration a complete "throw back" to *geoffroyi*, and *salvini acquatorialis* Chapman is nearer in general coloration to *geoffroyi* than any of the intermediate "species". We present the following synopsis.

- I. Whole side of head and neck barred.
 - a. Forehead and pileum cinnamon; breast light cinnamon buff; chest browner; subterminal bars on feathers of breast dusky, narrower. Typical *geoffroyi*. Pará region to the Rio Acará. (ranging further westward?)
 - b. Forehead and pileum paler, buffy; breast paler, buffy; chest grayer; subterminal bars of breast feathers much broader. *dulcis* Snethlage. Eastern and southeastern Brazil.
- II. Side of head and neck uniform, never barred.
 - a. Throat and breast strongly squamated, caused by black subterminal bars.

1. Forehead and pileum mostly bluish like crest; secondaries coppery green, rather than olive green as in *geoffroyi*; chin and throat and chest soiled whitish; subterminal bars on breast very broad, sometimes the entire feather black with a grayish tip; scarcely any pectoral collar. *squamiger* Todd. Right bank of the Rio Tapajoz, for an unknown distance eastward.
 2. Forehead cinnamon buff as in *geoffroyi*; secondaries olive green as in *geoffroyi*; chin, throat and chest rich buffy; subterminal bars on breast feathers narrower; a definite but very narrow pectoral collar; (in these respects intermediate between *geoffroyi* and *squamiger*). *iungens* Griscom and Greenway. Left bank of the Rio Tapajoz to the right bank of the Rio Madeira.
 3. Forehead bluish as in *squamiger*; secondaries coppery red; chin and throat whitish as in *squamiger*; breast and chest clay color much as in *geoffroyi*; underparts rich buff as in *iungens*; squamation on breast much as in *iungens*; pectoral collar broad. *lepidophanes* Todd. Rio Purus to right bank of Rio Solimoës, perhaps east to left bank of Rio Maderia.
- b. Breast faintly squamated, the feathers with pale tips, but subterminal bar, if present, only faintly darker than rest of feather.
1. Forehead rich cinnamon rufous as in *geoffroyi*; secondaries coppery, intermediate between *squamiger* and *lepidophanes*; underparts intermediate between *lepidophanes* and *pucherani*, the color of the belly and undertailcoverts much less rich and dark than any preceding race, and less contrasted with chest; pectoral collar broad and complete as in (*lepidophanes* and *pucherani*). *aequatorialis* Chapman. Known only from a few localities in Amazonian Ecuador.
 2. Forehead much paler, less rufescent; pectoral collar narrower and incomplete. *salvini*. Southern Central America and parts of Colombia.
- c. No squamation of any kind; feathers of breast and chest entirely uniform.
1. Forehead bluish or purplish, as in *squamiger* and *lepidophanes*; secondaries rich coppery red as in *lepidophanes*; chin to chest uniform clay color, the extreme in this

direction of tendencies in *aequatorialis* and *lepidophanes*; entire balance of underparts also clay color, the vent and under tailcoverts only faintly darker; broad complete pectoral collar. *pucherani* Deville. Rio Ucayali in northeastern Peru east to the left bank of the Rio Solimões (fide Todd), but series from these two extremes should be compared.

In conclusion we wish to point out that no *Neomorphus* is known from the Rio Acara to the Rio Tapajoz, and the genus is as yet unrecorded in the enormous area on the north side of the main Amazon from west of the Rio Negro to Amazonian Ecuador. We also suggest that the differences between *radiolosus* and *rufipennis* and any member of the group here discussed are the criteria for valid specific differences in this genus.

238. DROMOCOCCYX PAVONINUS Pelzeln

Type locality: Araguaya, Brazil

1 ♀ imm., Obidos (Carnegie Mus.)

While not previously recorded from Lower Amazonia, the occurrence of this little known species was to have been expected.

239. CROTOPHAGA MAJOR Gmelin

Type locality: Cayenne

Ipitinga (Hellmayr); Rio Capim (Wallace and Goeldi); Rio Inhangapy (Stone); Mexiana Island (Hagmann); Pará, Ilha das Oncas, Benevides, Marajo Island (Snethlage); Santarem (Chapman and Riker); Caviana Isl. (Pinto)

3 ♂ 1 ♀, north bank of Amazon near Obidos

2 ♂, Rio Tapajoz, Santarem and Caxiricatuba

1 ♂, Obidos (Carnegie Mus.)

1 ♂, Santarem (do.)

1 ♂ 1 ♀, Rio Tapajoz (do.)

240. CROTOPHAGA ANI Linnæus

Type locality: Brazil

Pará (Layard); Igarape-Assu (Hellmayr); Rio Capim (Goeldi); Rio Inhangapy (Stone); Mexiana Island (Wallace and Hagmann); San Antonio do Prata, Marajo Island (Snethlage); Santarem (Chapman and Riker)

2 ♂ 1 ♀, south bank of Amazon, Lago Grande

1 ♂ 1 ♀, Rio Tapajoz, Santarem and Pinhy

1 ♀, Obidos (Carnegie Mus.)

1 ♂, Santarem (do.)

241. GUIRA GUIRA (Gmelin)

Type locality: Brazil

Mexiana Island (Wallace and Hagmann); Marajo Island, Capanema, Quati-Puru (Snethlage); Caviana Island (Brodkorb)

One of the many characteristic birds of southern Brazil, which ranges north along the coast to the mouth of the Amazon.

Family TYTONIDAE

242. TYTO ALBA HELLMAYRI Griscom & Greenway, 1937

Type locality: Paramaribo, Surinam

Pará (Hellmayr, Snethlage, Pinto); Marajo Island (Snethlage); Mexiana Island (Hagmann); Santarem (Hellmayr)

1 ♂ 1 ♀, Rio Tapajoz, Santarem

A much larger bird than the southern *tuidara*, the distinctness of which Hellmayr suspected years ago.

Family STRIGIDAE

243. ASIO STYGIUS STYGIUS (Wagler)

Type locality: Brazil

1 ♂ 2 ♀, Rio Tapajoz, Pinkhy and Tauary

These birds constitute the first definite record for the Lower Amazon. [*Rhinoptynx clamator* can confidently be expected in our area, and should be sought for carefully]

244. BUBO VIRGINIANUS subsp.

Vicinity of Pará (Snethlage)

This bird, if not representing an undescribed race, might be *deserti* Reiser. The horned owl should be sought on Mexiana and Marajo Islands.

245. PULSATRIX PERSPICILLATA PERSPICILLATA (Latham)

Type locality:

Pará (Natterer); Marajo Island, Monte Alegre, Rio Tocantins, Rio Tapajoz (Snethlage); Santarem (Chapman and Riker)

246. OTUS CHOLIBA CRUCIGERUS (Spix)

Type locality: Amazon River

Mexiana Island (Wallace, Hagmann); Pará (Stone); Pará, Marajo Island, Rio Tocantins (Snethlage); Obidos (Hellmayr)

2 ♂ 1 ♀, 1 ?, Rio Tapajoz, Pinhy

1 ♀, north side of Amazon near Obidos

1 ♂, Obidos (Carnegie Mus.)

1 ♂, juv., Santarem (do.)

1 ♀, Rio Tapajoz (do.)

This is the widely distributed race of the Guiana—Amazon region. In the campo country further south it is replaced by *decussatus* (Lichtenstein).

247. OTUS WATSONII USTA (Slater)

Type locality: Ega, upper Amazon

Rio Tapajoz, Pinhel (Snethlage); Utinga (Pinto)

1 ♂ 1 ♀, Rio Tapajoz, Tauary and Caxiricatuba

In default of adequate material, these birds are subspecifically identified only provisionally, but Chapman (Birds Ecuador, 1926, p. 246) has restricted the type locality of *watsonii* Cassin to the "Napo, Region, east Ecuador", while *ustus* Slater was from "Ega on the upper Amazon". Compare also Naumburg, Birds of Matto Grosso, 1930, p. 117, who inadvertently uses the combination "*usta watsoni*".

248. LOPHOSTRIX CRISTATA CRISTATA (Daudin)

Type locality: Guiana

Pará (Wallace); Santarem (Chapman and Riker); Monte Christo and Obidos (Pinto)

2 ♂, Rio Tapajoz, Tauary and Caxiricatuba

1 ♂, Santarem (Carnegie Museum)

249. CICCABA VIRGATA SUPERCILIARIS (Pelzeln)

Type locality: Brazil

Pará (Wallace); Ipitinga (Hellmayr); Rio Curuá (Snethlage); Murutucu (Pinto)

1 ♂, Rio Tapajoz, Tauary

This specimen agrees with the Pará bird described by Sharpe in the Catalogue of Birds in having a black and white barred tail. Pinto

records the Murutucu specimen as true *virgata*, which is quite impossible. Presumably his bird represents the dark phase of *super-ciliaris*.

250. *CICCABA HUHULA* (Daudin)

Type locality: Cayenne

1 ♀, Obidos (Snethlage)

It is very doubtful if *huhula* and *nigrolineatum* are really specifically distinct.

251. *GLAUCIDIUM BRASILIANUM BRASILIANUM* (Gmelin)

Type locality: Brazil

Pará (Snethlage)

According to Hellmayr typical *brasilianum* ranges north to the south bank of the Amazon. The species will surely be found on the north bank, where there is open country. Such birds might prove to be *phalænoides*.

Family NYCTIBIIDAE

252. *NYCTIBIUS GRISEUS CORNUTUS* (Vieillot)

Type locality: Paraguay

Pará (Natterer and Snethlage); Rio Capim (Layard); Rio Jamauchim (Snethlage); Murutucu (Pinto)

2 ♂, Rio Tapajoz, Tauary and Caxiricatuba

1 ♀, Santarem (Carnegie Mus.)

Amazonian birds are really intermediate between the large *cornutus* and the very small *griseus* of the Guianas. Our birds are distinctly nearer the former, however, and have more pronounced barring on the inner webs of the primaries. It is possible that specimens from the north bank of the Amazon might prove referable to *griseus*.

253. *NYCTIBIUS LONGICAUDATUS* (Spix)

Type locality: Rio Japura, Brazil

1 ♂, Rio Capim, Resacca (Snethlage)

254. *NYCTIBIUS ÆTHEREUS* (Wied)

Type locality: Bahia

Mexiana Island (Hagnann, fide Hellmayr)

In default of specimens we can only cite the records for these two species, which are still very rare in collections. Our belief, however, is that they are two representative subspecies, and that the two records from our area really deal with an intermediate population which is a connecting link between the two.

255. NYCTIBIUS GRANDIS (Gmelin)

Type locality: Cayenne

Pará, Rio Moju, Marajo Island (Hellmayr and Snethlage); Obidos (Hellmayr); Santarem and Pataua (Pinto)

2 ♂, 5 ♀, north bank of Amazon near Obidos

1 ♂, 1 ♀, Rio Tapajoz, Santarem

2 ♀, Santarem (Carnegie Mus.)

Family CAPRIMULGIDAE

256. CHORDEILES ACUTIPENNIS ACUTIPENNIS (Hermann)

Type locality: Cayenne

Cajutuba (Natterer); Pará, Marajo Island, Monte Alegre, Rio Jamundá, Rio Tocantins, Rio Xingú (Snethlage)

9 ♂ 1 ♀, Santarem (Carnegie Mus.)

3 ♂ 1 ♀, Rio Tapajoz, Apacy (do.)

As with many widely ranging South American birds, this Night-hawk is larger in the south. Guiana birds are the smallest, and those from the extreme southern limits of the range are appreciably larger. It follows that intermediate birds occupy the greater part of the range in eastern South America, and we see no point in recognizing a southern race, for which *brasilianus* (Gmelin) is the earliest of several available names, which probably apply to this species.

257. CHORDEILES RUPESTRIS RUPESTRIS (Spix)

Type locality: Rio Negro

Rio Tapajoz (Snethlage)

1 ♂ 1 ♀, Rio Tapajoz, Pinhel and Caxiricatuba

10 ♂ 11 ♀, Rio Tapajoz, various localities (Carnegie Mus.)

The subspecific variations of this species remain to be determined, and those proposed require confirmation with a good series of topotypes from the Rio Negro, as well as series from the type localities

of *zaleucus* Oberholser (Pebas, Peru) and *xyostictus* Oberholser ("Bogota", Colombia, where the species does not occur!). As a whole it is an upper Amazonian species, and on the south side of the Amazon has been found eastward only on the Rio Madeira and the Rio Tapajoz. The record of "Pará" in Ihering's Cat. Fauna Bras., 1907, p. 132, certainly requires confirmation.

If there really is any racial variation in this species, one would expect that the birds from the south side of the Amazon would differ from those of the Rio Negro. Hellmayr (1910) claimed that the differences between Peruvian and Rio Madeira specimens were "insignificant". It is possible, therefore, that our birds from the Rio Tapajoz may prove to be *zaleucus*.

258. NYCTIPROGNE LEUCOPYGA (Spix)

Type locality: Amazon River

Monte Alegre and Rio Jamundá, Faro (Snethlage)

1 ♂ 2 ♀, 1 ?, Rio Tapajoz, Pinhy

1 ♀, Santarem (Carnegie Mus.)

3 ♂ 6 ♀, Rio Tapajoz, various localities (do.)

A characteristic river forest Nighthawk, which reaches the southern limit of its range on the south side of the Amazon. In the more open campo country it is replaced by *Nannochordeiles pusillus*, which is unknown in the Amazonian forest area.

259. PODAGER NACUNDA NACUNDA (Vieillot)

Type locality: Paraguay

Pará (Hellmayr, Stone); Rio Capim (Wallace); Quati-puru and Rio Tocantins (Snethlage)

3 ♂ 6 ♀, Rio Tapajoz, various localities.

6 ♂ 15 ♀, Santarem (Carnegie Mus.)

The wings of our females measure 234-246 mm., thus running slightly smaller than birds from southern Brazil. It is possible that specimens from the northwestern corner of our area (Rio Jamundá to Obidos) might prove referable to *minor* Cory of the Rio Branco, Brazil, northward.

260. LUROCALIS SEMITORQUATUS NATTERERI (Temminck)

Type locality: Brazil

Pará (Wallace); Strada Bragança (Layard); Ilha das Oncas (Snethlage)

A very little known bird in our area, apparently more common southward. Typical *semitorquatus* of the Guianas is even less known, and its southern limits remain to be determined. A specimen collected by Natterer on the Rio Icanná is currently referred to this race. This river is a small tributary on the west side of the Rio Negro in extreme northwestern Amazonas, near both the Colombian and Venezuelan boundaries.

261. *HYDROPSALIS CRASILIANA CRASILIANA* (Gmelin)

Type locality: northeastern Brazil

Rio Xingú and Santarem (Snethlage); Santarem (Pinto).

1 ♂ 1 ♀, Rio Tapajoz, Santarem

2 ♀, Santarem (Carnegie Mus.)

Another little known species, which ranges west to the Rio Madeira and south to Bahia and Matto Grosso. Still further south it is replaced by the larger and paler *furcifera* (Vieillot).

262. *HYDROPSALIS CLIMACOCERCA CANESCENS*

Griscom & Greenway, 1937.

Type locality: Lago Grande, south bank of Amazon, west of Rio Tapajoz

2 ♂ 2 ♀, Lago Grande; 1 ♂, Rio Tapajoz, Pinhel

1 ♂, Rio Tapajoz, Itaituba (Carnegie Mus.)

As yet only known from the localities listed above, and possibly Manacapuru, Rio Solimoes.

263. *HYDROPSALIS CLIMACOCERCA PALLIDIOR* Todd, 1937.

Type locality: Santarem

14 ♂ 5 ♀, Santarem (Carnegie Mus.)

264. *HYDROPSALIS CLIMACOCERCA INTERCEDENS*, Todd, 1937.

Type locality: Islands in Amazon, near Obidos

1 ♂ 3 ♀, Obidos (Carnegie Mus.)

This distinct subspecies is, in our opinion, an obvious connecting link between *climacocerca* and the dark *schomburgki* of British Guiana.

In spite of the two recent papers on this species, the writers do not agree wholly in their interpretation of the same material, and other

points still await proper series and study. Mr. Todd agrees with us that a fourth very distinct, buffy subspecies occurs on the Rio Purus. He refers Rio Solimoes birds to *canescens*, while we suspect that they are subspecifically distinct. The question still remaining to be settled is what are the exact subspecific characters of true *climacocerca* from the lower Ucayali River, Peru? We assumed that the Rio Solimoes birds might represent it. Mr. Todd thinks that the Rio Purus birds probably do. On the other hand, we were not prepared to separate birds from the two banks of the Rio Tapajoz as different subspecies. It follows, therefore, that good series from the Rio Ucayali and the Rio Solimoes may alter the present picture in one of several possible ways.

Incidentally the British Museum Catalogue records a specimen by Wallace from the "Rio Tocantins". There is every possibility that Tonantins in Upper Amazonia is actually intended. In no case was Pinto (1938) justified in ascribing this record to typical *climacocerca*.

265. NYCTIDROMUS ALBICOLLIS ALBICOLLIS (Gmelin)

Type locality: Cayenne

Recorded from every collecting locality in our area

- 5 ♂, Rio Tapajoz, various localities.
- 1 ♂ 1 ♀, Obidos (Carnegie Mus.)
- 2 ♂ 1 ♀, Santarem (do.)
- 4 ♀, Rio Tapajoz, Apagy (do.)

266. NYCTIPHRYNUS OCELLATUS OCELLATUS (Tschudi)

Type locality: Peru

- 1 ♀, Rio Tapajoz, Boim (Snethlage)
- 1 ♀, Rio Tapajoz, Tauary (M.C.Z.)

As shown in our revision (1937) this rare Whippoorwill is represented by *brunescens* Griscom and Greenway in southern Brazil and by *lautus* Miller and Griscom in Central America.

267. NYCTIPOLUS NIGRESCENS NIGRESCENS (Cabanis)

Type locality: British Guiana

Pará (Natterer and Wallace); Utinga (Pinto); Rio Acará, Rio Tocantins, Rio Tapajoz, Rio Jary, Rio Jamundá (Snethlage)

- 3 ♂ 1 ♀, Rio Tapajoz, Pinhel and Caxiricatuba
- 1 ♂, Obidos (Carnegie Mus.)
- 2 ♂, Santarem (do.)
- 1 ♀, Rio Tapajoz, Villa Braga (do.)

See Griscom and Greenway, 1937, for our understanding of racial variation in this species.

268. CAPRIMULGUS RUFUS RUFUS Boddaert

Type locality: Cayenne

Pará (Natterer); Santarem (Pinto)

2 ♂, Rio Tapajoz, Tauary and Pinhy

6 ♂, Santarem (Carnegie Mus.)

As we understand it, true *rufus* is restricted to the Guianas and northeastern Brazil, south possibly to Bahia. Still further south we find a paler less rufescent bird, for which the name *rutilus* Burmeister is probably correct.

269. CAPRIMULGUS SERICEOCAUDATUS (Cassin)

Type locality: South America, Brazil or Venezuela

1 ♀, Santarem, Nov. 6, 1919 (Carnegie Mus.)

This Caprimulgus is definitely known only from the type, which is presumably a male. The female, listed above, probably belongs here, when due allowance is made for the sex differences known in the related species of the genus. The holotype has not, however, been examined in the present connection.

270. CAPRIMULGUS MACULICAUDUS (Lawrence)

Type locality: Pará

Pará (Hellmayr, Stone); Rio Acará (Hellmayr); Marajo Island and Arumanduba (Snethlage)

1 ♂, Marajo Island (Linden in M.C.Z.)

2 ♂ 1 ♀, Santarem (do.)

1 ♂, Obidos (Carnegie Mus.)

12 ♂ 6 ♀, Santarem (do.)

This species is still rare in collections. Hartert in the Cat. Birds Brit. Mus., 16, p. 575, gave its range as the Andes from Colombia to Peru, regarding Lawrence's type locality as incredible. Hellmayr's notes on this species (1907, p. 397) should be consulted.

271. CAPRIMULGUS PARVULUS PARVULUS Gould

Type locality: Rio Paran 

Par , Benevides, Rio Xing  (Snethlage); Santarem (Chapman and Riker)

1 ♂ imm., Par , Bosque

1 ♀, Santarem (Carnegie Mus.)

Family MICROPODIDAE

272. *CHAETURA SPINICAUDA SPINICAUDA* (Temminck)

Type locality: Cayenne

1 ♀, Obidos (Carnegie Mus.)

273. *CHAETURA SPINICAUDA AETHALEA* Todd, 1937.

Type locality: Benevides, Pará, Brazil.

Pará (Layard and Natterer); Santarem (Wickham)

6 ♂ 1 ♀, Benevides (Carnegie Mus.)

1 ♂, Santarem (do.)

274. *CHAETURA BRACHYURA* Jardine

Type locality: Tobago

Pará (Layard and Snethlage)

2 ♂ 1 ♀, Rio Tapajoz, Apaçy, Itaituba (Carnegie Mus.)

275. *CHAETURA CHAPMANI* subsp.

1 ♂ Benevides (Carnegie Mus.)

In default of comparative material, no subspecific identification is attempted.

276. *REINARDA SQUAMATA SQUAMATA* (Cassin)

Type locality: British Guiana

1 ♂ Santarem (Carnegie Mus.)

277. *PANYPTILA CAYANNENSIS* (Gmelin)

Type locality: Cayenne

Nazaré (Layard); Pará (Stone); Pará, Apehu, Rio Jamundá (Snethlage)

Family TROCHILIDAE

278. *THRENETES LEUCURUS MEDIANUS* Hellmayr

Type locality: Tury-assu, Maranhao, Brazil

Pará and S. Antonio do Prata (Hellmayr); Snethlage for both these localities;

Pará, Rio Inhangapy (Stone)

This recently proposed form (1929, p. 381) connects the two supposed species *leucurus* and *cervinicauda*, but is a geographic extreme. Hellmayr refers Rio Madeira birds to typical *leucurus* of the Guianas.

279. GLAUCIS HIRSUTA HIRSUTA (Gmelin)

Type locality: northeastern Brazil

Pará (Layard, Hellmayr, Snethlage, Stone); S. Antonio do Prata (Hellmayr);

Marajo Island (fide Simon); Utinga, Murutucu (Pinto)

1 ♂, Benevides, (Carnegie Mus.)

2 ♂, Rio Tapajoz (do.)

The Benevides bird does *not* differ from Guiana specimens.

280. GLAUCIS HIRSUTA subsp.

1 ♂ imm., north bank of Amazon near Obidos

As Hellmayr has correctly remarked, the racial variation of this species is still unsettled in eastern South America, due to inadequate material. Five specimens from Surinam differ from true *hirsuta* in two characters claimed for *roraimæ* Boucard by Simon, the brighter rufescent chest contrasted with the paler belly and the more extensive black subterminal area on the outer rectrices. Specimens from Trinidad and Grenada do not show these characters, however, and we can see no difference between them and a typical *hirsuta*. Our one bird from the north bank of the Amazon is intermediate between *hirsuta* and the Surinam birds in the characters mentioned, but is almost as dark below as *affinis* from Panama and north Colombia.

There are also nomenclatural difficulties. The earliest name for any race north of the Amazon would be *mazeppa* (Lesson) from "Guiana". A study of the colored plate and description, however, in comparison with the description and plate of *hirsuta* (what Lesson called erroneously the ♀ of *Trochilus superciliosus* L.) strongly arouses suspicion that it might be a much earlier name for *Heteroglaucis philippinae* Penard, the proper status of which still remains to be determined.

281. PHOETHORNIS SUPERCILIOSUS SUPERCILIOSUS (Linnaeus)

Type locality: Cayenne

Rio Jary, San Antonio do Cachoeira (Snethlage)

2 ♂, Obidos (Carnegie Mus.)

282. *PHOETHORNIS SUPERCILIOSUS MÜLLERI* Hellmayr

Type locality: Pará

San Antonio do Prata, Pará, Rio Inhangapy (Stone); Peixe-Boi, and Ipitinga (Hellmayr); Mocajutuba, Ananindeua, Santa Isabel, Rio Mojú, Rio Tocantins (Snethlage); Murutucu (Pinto)

1 ♀, Pará, Bosque

2 ♀, Rio Acará, Buenos Aires

2 ♂, 1 ♀, Rio Tapajoz, Pinhy and Tauary

1 ♂, Benevides (Carnegie Mus.)

1 ♂ 2 ♀, Santarem (do.)

1 ♂ 1 ♀, Rio Tapajoz, Miritituba (do.)

283. *PHOETHORNIS SUPERCILIOSUS INSIGNIS* Todd, 1937

Type locality: Itaituba, left bank Rio Tapajoz, Brazil

5 ♂ 1 ♀, Rio Tapajoz, Villa Braga and Itaituba, (Carnegie Mus.)

A well marked subspecies, presumably ranging west to the right bank of the Rio Madeira. Across that river to the Rio Solimoes we find *ochraceiventer* Hellmayr, and still further west *moorei* Lawrence. The distribution of the species on the north bank of the Amazon is still practically unknown.

284. *PHOETHORNIS BOURCIERI BOURCIERI* Lesson

Type locality: Brazil

1 ♂, Rio Tapajoz, Caxiricatuba

This species has been completely overlooked in our area, and in spite of the type locality, the only record for Brazil is Natterer's from Marabitanas on the Rio Negro. Birds passing as *bourcieri* are now well known from the Peruvian, Ecuador and Colombian Amazons, much rarer northeastward to the Guianas. These latter birds are all strikingly different from our specimen from the Rio Tapajoz and an east Ecuador series, in being much less white and grey below, the underparts almost uniform pale mouse brown, paler on chin, throat and belly, instead of whitish and greyish with a faint brownish tinge on the sides. Thanks to the authorities of the American Museum we have examined ample material listed below. The two races are as follows:

1. typical *bourcieri* (Lesson). We designate Rio Tapajoz as a more restricted type locality. Whiter and greyer below. One record from lower Amazonia; 10 ♂ 2 ♀ from Amazonian Ecuador belong here also,

and possibly the Rio Negro specimen described by Pelzeln as *Ametrornis abnormis*, *nee* Reichenbach *nomen nudum*.

2. *whitelyi* Boucard, 1891, ex British Guiana. Below nearly uniform pale mouse brown. 4 specimens from British and Dutch Guiana, 1 ♂ from Mt. Duida, Venezuela. 4 ♂ from Caquetá, Colombia are intermediate.

This name, *Phacthornis whitelyi* Boucard, Hummingbird, 1, 1891, p. 18 (British Guiana) must not be confused with *Eremita whitelyi* Boucard, Genera Hummingbirds, 1895, p. 390 (Kanuku Mts., British Guiana) which is a synonym of *episcopus* Gould, now a race of *ruber*.

285. PHOETHORNIS RUPURUMI AMAZONICUS Hellmayr

Type locality: Santarem

Santarem (Hellmayr); Rio Tapajoz, Arumanduba, Monte Alegre (Snethlage); Obidos (Hellmayr)

4 ♂ 1 ♀, north bank of Amazon near Obidos

4 ♂ 1 ♀, Rio Tapajoz, Santarem and adjacent localities

4 ♂, Santarem (Carnegie Mus.)

286. PHOETHORNIS RUBER RUBER Linnaeus

Type locality: Surinam

Pará (Layard, Stone); S. Antonio do Prata and Peixe-Boi (Hellmayr); Providencia, Ananindeua, Maguary, Sta. Isabel, Quatipuru, Rio Tocantins, Rio Tapajoz (Snethlage); Santarem (Hellmayr); Murutucu, Utinga (Pinto)

1 ♂, Pará, Bosque

4 ♂, Rio Tapajoz, various localities

1 ♀, Santarem (Carnegie Mus.)

287. CAMPYLOPTERUS LARGIPENNIS LARGIPENNIS (Boddaert)

Type locality: Cayenne

1 ♂, Obidos (Carnegie Mus.)

288. CAMPYLOPTERUS LARGIPENNIS OBSCURUS Gould

Type locality: Amazon valley

Pará (Layard, Wallace, Hellmayr, Stone); S. Antonio do Prato (Hellmayr); Castanhal, Rio Inhangapy (Stone, Snethlage); Peixe-Boi (Hellmayr); Mocayatuba, Apehu, Sta. Isabel, Benevides, Rio Mojú, Marajo Island (Snethlage); Utinga, Murutucu (Pinto)

5 ♂ 4 ♀, 3?, Pará, Bosque

1 ♂ 2 ♀, Rio Acará, Acara and Buenos Aires

2 ♂ 1 ♀, Benevides (Carnegie Mus.)

2 ♂ 1 ♀, 1 ? Rio Tapajoz, Miritituba, Itaituba, Apaçy (Carnegie Mus.)

This well known hummer only differs from *largipennis* (Boddaert) of the Guianas in having narrower white tips to the lateral rectrices. It has a remarkably restricted range in northeastern Brazil. This species is as yet unrecorded between the Rio Acará and the Rio Madeira, where *aequatorialis* Gould is supposed to occur. The specimens in the Carnegie Museum prove that this disposition of the case is unsatisfactory. The Rio Purus birds agree with *aequatorialis* in two important particulars: (1) the underparts are a lighter grey, almost white on the belly and (2) the tail tips are white, not greyish, and much wider, especially the next to the outermost. The tail above, however, is coppery green, not bluish green as in *aequatorialis*. The Tapajoz bird has the same tail tips as the Purus birds and *aequatorialis* but is otherwise like *obscurus*.

289. EUPETOMENA MACROURA MACROURA (Gmelin)

Type locality: Cayenne

Para, Ilha das Oncas, Monte Alegre (Snethlage); Mexiana Island (Wallace and Hagmann); Marajo Island (Hellmayr, Snethlage, Pinto); Santarem (Chapman and Riker)

1 ♂, Santarem (Carnegie Mus.)

290. FLORISUGA MELLIVORA (Linnaeus)

Type locality: Guiana

Pará (Layard, Wallace, Stone); Rio Inhangapy (Stone); S. Antonio do Prata, Peixe-Boi and Ipitinga (Hellmayr); Benevides, Sta. Isabel, Rio Guamá, Marajo Island, Rio Tocantins (Snethlage)

2 ♂ 1 ♀, Pará, Bosque

4 ♂ 1 ♀, Rio Tapajoz, various localities

1 ♀, Benevides (Carnegie Mus.)

2 ♂, Rio Tapajoz, Apacy (do.)

291. AGYRTRINA VERSICOLOR NITIDIFRONS (Gould)

Type locality: Pará

S. Antonio do Prata and Ipitinga (Hellmayr); Rio Tocantins (Snethlage), either this or the next race

1 ♂, Rio Tapajoz, Tauary

1 ♀, Santarem (Carnegie Mus.)

This race of the common *versicolor* of central and southern Brazil occupies a very restricted area from the south side of the mouth of the Amazon to Ceará, Piahy and Maranhao.

292. AGYRTRINA VERSICOLOR subspecies

5 ♂ 10 ♀ 2 ?, near Obidos
 1 ♀, Obidos (Carnegie Mus.)

Characters. Connecting *A. milleri* (Bourcier) of the Rio Negro northwestward with *versicolor nitidifrons* (Gould) of Pará; throat and breast pure white as in *milleri*, instead of glittering green as in *nitidifrons*; crown plaque nearly pure green, not bluish green as in *milleri*, and restricted as in *nitidifrons*; bill short, 13.5–15 mm. as in *nitidifrons*, instead of 16–16.5 mm. as in *milleri*.

Remarks. Specific lines have been greatly overdone in this genus, as with so many other groups of Hummingbirds. Hellmayr (Birds Northeast Brazil, p. 396) has recently shown that *nitidifrons* and *versicolor* are conspecific, and in a valuable footnote on Simon's types of *meracula* and *laglaizi*, alludes to *milleri* as a subspecies also, without, however, assigning any definite reasons. The present form, also a geographic intermediate, provides abundant proof of the correctness of this view. In two specimens in our series of 17 from the region around Obidos, there are two or three glittering green feathers on the otherwise white throat, giving final evidence of complete intergradation in the most striking and obvious difference between *milleri* and *nitidifrons*.

There are hopeless nomenclatural complications due to the indefinite "*nitidifrons meracula*" Simon (Hist. Nat. Troch., pp. 114, 329) and "*milleri laglaizi*" Simon. Simon's concept of specific lines was quite different from that of previous workers. He kept *milleri* and *nitidifrons* as a distinct species, and while giving all the differentiating characters, did not consider that the white versus glittering green throat was the outstanding difference between them. Accordingly *meracula* is briefly diagnosed on p. 114 as differing from *nitidifrons* in having the throat and breast white as in *milleri*, the bill 15 mm. long. The question naturally arises whether our bird from Obidos could possibly be *meracula*. Two footnotes throw important light on this question. Simon knew *meracula* from two sources (1) 2 specimens from the Wiener mission labelled "Napo" [=east Ecuador], but the locality regarded by Simon as erroneous, as the make of the skins suggested Guiana trade-skins. These specimens differ from *nitidifrons* [and incidentally *milleri*] in having green, not bluish green, crown plaques. (2) a bird from the Orinoco, very much bluer, in some feathers wholly blue, suggesting *A. hollandi* Todd, also from Venezuela, a much earlier name.

It will be apparent, therefore, that *meracula* is a vague composite of two elements. The differences between it and *milleri laglaizei* are completely in the air, as far as Simon's treatment is concerned. In these circumstances the name must await more definite application. We note that Hellmayr (loc. cit.) doubts the locality Rio Napo, but Guiana is equally uncertain, the facts being that it would surely be remarkable if this species had completely escaped detection in both regions.

Previous records of this race in our area have been listed as *Agyrtrina milleri*. These are Obidos (Hellmayr) and Rio Jamundá, Faro (Snethlage). Hellmayr's note on his female from Obidos clearly describes the present subspecies. True *milleri* (Bourcier) ranges from the Rio Negro northwestward and northward to Colombia and Venezuela, where further racial variation may prove to take place.

293. AGYRTRINA LEUCOGASTER LEUCOGASTER (Gmelin)

Type locality: Cayenne
Pará (Snethlage)

The typical race of this species ranges from the Guianas to north-eastern Brazil, and the poorly defined *bahiæ* Hartert from Pernambuco southward. True *leucogaster* does not appear to be uncommon just south of our area in Maranhao and Piauhý, and the dearth of records near Pará is consequently surprising.

294. AGYRTRINA FIMBRIATA FIMBRIATA (Gmelin)

Type locality: Cayenne
Maracá, Monte Alegre, Igarapé de Paituna (Snethlage); Obidos (Hellmayr)
3 ♂, Rio Amazonas, north bank near Obidos

295. AGYRTRINA FIMBRIATA NIGRICAUDA (Elliot)

Type locality: Bahia
Mexiana Island (Wallace); Marajo Island (Hellmayr); Quati-Puru, Rio Tocantins, Rio Iri, Rio Tapajoz (Snethlage); near Santarem (Hellmayr, Pinto).

1 ♂, Pará, Bosque

16 ♂ 7 ♀, Rio Tapajoz, various localities

This fine series enables us to complete Hellmayr's recent critique of the variations of this species in eastern South America (cf. *Birds Northeast Brazil*, p. 394). A series of 36 topotypes from Surinam compared with 8 from British Guiana show that the characters for *nitidicauda* Elliot have no geographic constancy. Hellmayr proves to be more or less right in his assumption that the Amazon is the boundary between true *fibriata* and *nigricauda*, though all birds from the south bank are intermediate. Thus our three birds from the north bank near Obidos are typical *fibriata*. The great series from the Tapajoz agrees with *nigricauda* and differs obviously from true *fibriata* in having pure white under tailcoverts or at most a fine streak of grey at the base of the shaft. All, however, agree with *fibriata* rather than *nigricauda* in the coloration of the central tail feathers. A specimen from Pará belongs here also, as might be expected, but curiously enough four old specimens, purporting to come from Pernambuco, belong here also. They are trade skins with no data and of course may not have come from the immediate vicinity of Pernambuco. We see no basis for proposing an intermediate race. Hellmayr refers a bird from the Rio Madeira to typical *fibriata*.

296. HYLOCHARIS CYANUS VIRIDIVENTRIS Berlepsch

Type locality: Venezuela, Merida

San Antonio and Santarem (Hellmayr)

2 ♂, Rio Amazonas, Lago Cuipeuz near Obidos

1 ♂, Itaituba (Carnegie Mus.)

1 ♀, Santarem (do.)

297. HYLOCHARIS SAPPHIRINA (Gmelin)

Type locality: Guiana

Para (Stone); San Antonio (Hellmayr); Pará, Ananindeua, Sta. Isabel, Marajo Island, Rio Tocantins, Rio Tapajoz, Monte Alegre (Snethlage); Utinga (Pinto)

3 ♂ 6 ♂ imm., 1 ♀, Rio Tapajoz, left bank

1 ♂ 1 ♀, Rio Amazonas, Lago Cuipeuz near Obidos

2 ♂ imm., Pará, Bosque

1 ♂ 2 ♀, Rio Tapajoz, Itaituba (Carnegie Mus.)

298. *CHLORESTES NOTATUS CYANOGENYS* (Wied)

Type locality: eastern Brazil

Pará (Hellmayr, Layard, Wallace, Snethlage, Stone); S. Antonio do Prata (Hellmayr); Mexiana Island (Hagmann); abundant throughout (Snethlage); Obidos (Hellmayr); Santarem (Chapman and Riker)

10 ♂ ad., 4 ♂ imm., 6 ♀, Rio Tapajoz, east bank

9 ♂ ad., Rio Amazonas, Lago Cuipeuz

10 ♂ imm., Pará, Bosque

2 ♂, Benevides (Carnegie Mus.)

1 ♂, Santarem (do.)

1 ♂, Rio Tapajoz, Itaituba (do.)

This fine series differs very markedly and strikingly from 56 specimens from Surinam, Trinidad and east Ecuador (including certain trade skins, "Demerara", "Guiana", and "Brazil") in being glittering bluish green on most of the underparts, the chin violet passing rapidly to bluish green, only the lower edge of the abdomen glittering green or golden green. This is very different from typical *notatus*, in which the violet chin spot is sharply contrasted with the throat, breast and abdomen, which are green or even golden green, rarely with a faint bluish tinge on the upper throat and sides of neck.

There are unusual nomenclatural points involved. In 1913 Riley described *Chlorostilbon prasinus puruensis*, which two years later (Proc. Biol. Soc. Wash., 1915, p. 179) he showed should be called *Chlorestes caeruleus puruensis*. The race *puruensis* differed supposedly from a small series of skins from Lower Amazonia in having slightly longer bills. This difference proves not to hold, as some birds from the Guianas have bills up to 19 mm., and others from upper Amazonian Ecuador have shorter bills than Riley's Rio Purus birds. With *puruensis* transferred to *Chlorestes*, it must, however, be considered with the recognition of an Amazonian race. It is preoccupied several times over. The earliest name is *eyanogenys* Wied, renamed *wiedi* Lesson, whose description emphasizes the bluish green throat. *Agyrtia meliphila* Pelzeln, Rio Negro, possibly belongs here, and *Eucephala subcaerulea* discussed below, comes next in chronological order!

We have examined the unique *Eucephala subcaerulea* Elliott in the American Museum. In this bird the violet chin passes into a deep blue throat and chest, and the underparts do not become bluish green until the center of the abdomen. The skin is of typical "Bahia" make, and as perfectly ordinary *notatus* occurs commonly around Bahia, we are convinced that *subcaeruleus* is a hyperchromatic aberration of *C. notatus eyanogenys* Wied.

The folly of basing ranges and systematic or racial characters upon trade skins is well exemplified in the present connection. The Museum of Comparative Zoölogy happens to have an ample series from authentic localities to check against many trade-skins. Thus a Trinidad series collected by Cherrie at Caparo cannot be separated from those from Surinam in the Penard collection. But a series of trade skins from "Trinidad" are more bluish green below than the series from the south bank of the Amazon; consequently they cannot possibly have come from this island. Another long run of trade-skins from "Brazil" is even more illuminating. "Bahia" trade skins are supposed to have more golden green upperparts and the blue chin spot more sharply defined. There is nothing in this, as some "Bahia" skins before us do not show these characters, and other specimens authentically from Surinam or Trinidad do.

In this connection we may briefly consider the almost unknown *C. hypocyaneus* (Gould), the type and one other specimen, both trade skins of Rio or Bahia "make." Many years of exploration have failed to produce either an authentic specimen or a range for this bird. In Hummingbirds this strongly raises the presumption of hybrid origin. Thanks to Gould's beautiful plate, Simon's and Hellmayr's critiques (Novit. Zool., 1908, p. 11) and the utter confusion of generic lines in this group of Hummers, we are able to suggest a possible explanation of *C. hypocyaneus* (Gould). It will be found to be a perfect combination of *Hylocharis cyanus* and *Chlorestes notatus*, both common and occurring over large areas of Brazil together. The more golden green back and coppery upper tailcoverts come from the first parent. The dull crown comes from the second parent, and the glittering blue throat and breast is an exact combination of the violet of *Hylocharis cyanus* and the green or bluish green of *Chlorestes notatus*.

299. CHLOROSTILBON PRASINUS PRASINUS (Lesson)

Type locality: "Brazil", in error, fide Hellmayr
Mexiana Island (Hellmayr); Maracá (Snethlage)

1 ♂, Rio Amazonas, Lago Grande

Lack of material makes it impossible to do anything with this group, the nomenclature and racial variations of which have been thrown into hopeless confusion by Simon. We follow Hellmayr, however, in applying *prasinus* to this species and not to the *aurcorentis-pucherani* group with deeply forked tails. In the concept maintained above, *prasinus*, *subfurcatus* Berlepsch, *brericaudatus* Gould, *daphne* Gould,

vitticeps Simon, and *peruanus* Gould are all undoubtedly forms of one species, but how many of them are synonyms of each other remains to be finally determined.

300. THALURANIA FURCATA FURCATA (Gmelin)

Type locality: Cayenne

Obidos (Snethlage)

1 ♂, Obidos (Carnegie Mus.)

301. THALURANIA FURCATA BALZANI Simon

Type locality: Yungas, Bolivia

Rio Tapajoz, various localities on the left or west bank (Hellmayr and Snethlage)

1 ♂, Rio Tapajoz, Miritituba (Carnegie Mus.)

1 ♂ 1 ♀, Rio Tapajoz, Villa Braga (do.)

Hellmayr has shown (1910, p. 376) that this form reaches the northern limits of its range on the south side of the Amazon between the Rio Madeira and the Rio Tapajoz. Further west it is replaced by *simoni* Hellmayr along the Rio Solimoes. In central and southeastern Brazil this group is represented by *baeri* Hellmayr and *eriphile* (Lesson).

302. THALURANIA FURCATA FURCATOIDES Gould

Type locality: Pará

Pará (Layard, Wallace, Stone); Rio Inhangapy, Rio Guamá (Stone); Souza, Peixe-Boi, Igarape-Assu, S. Antonio do Prata, Mexiana Island (Hellmayr); Marajo Island and numerous localities near Pará (Snethlage); Rio Tocantins (Snethlage); Utinga, Murutucu (Pinto)

6 ♂ 4 ♀, Pará, Bosque

8 ♂ 3 ♀, Rio Tapajoz, various localities east bank.

1 ♂ 1 ♀, Benevides (Carnegie Mus.)

2 ♂ 1 ♀, Santarem (do.)

The Pará birds are topotypes of *furcatoides* Gould, as Hellmayr showed years ago. Our series from the right bank of the Tapajoz is inseparable from the Pará series. Both series show conclusively that the characters of *intermedia* Snethlage from the Rio Tocantins are those of younger males, such specimens occurring both in our Pará and Rio Tapajoz series. We have here a welter of species which are really races. In the far west *nigrofasciata* (Gould), *tschudii* Gould, and *jelskii* Taczanowski are three obvious representative forms, which are

connected with the whole *furcata* complex of eastern South America by *balzani* Simon and *simoni* Hellmayr. The *colombica-fannyi* series comes perilously close to the western extremes discussed above, and *watertoni* (Bourcier) is little more than a remarkable long-tailed extreme of the eastern group of subspecies.

303. AVOCETTULA RECURVIROSTRIS (Swainson)

Type locality: Cayenne

S. Antonio do Prata (Hellmayr); Monte Alegre, Rio Tocantins (Snethlage); Rio Guamá (Stone); Santarem (Pinto)

1 ♂ ad., 4 ♂ imm., 1 ♀, Rio Amazonas. Lago Cuipeuz

304. ANTHRACOTHORAX VIRIDIGULA (Boddaert)

Type locality: Guiana

Pará (Stone); S. Antonio do Prata (Hellmayr); Cunany, Monte Alegre, Pará (Snethlage); Mexiana Island (Wallace)

1 ♀, Rio Amazonas, Boca do Igarapé Piaba

2 ♂ 7 ♀, Obidos (Carnegie Mus.)

1 ♂ ad. 1 ♂ imm., Santarem (do.)

Apparently all previous records from Brazil are from Pará and possibly Maranhao.

305. ANTHRACOTHORAX NIGRICOLLIS NIGRICOLLIS (Vieillot)

Type locality: Brazil

Pará (Layard); S. Antonio do Prata, Rio Acará (Hellmayr); Mexiana Island (Hagmann and Wallace); Marajo Island, Itacuan, Rio Tocantins (Snethlage)

5 ♂ 11 ♀, Rio Tapajoz, various localities

1 ♂ 1 ♀, Rio Amazonas, Boca do Igarapé Piaba

3 ♂ ad., 1 ♂ imm., Santarem (Carnegie Mus.)

Excellent series from all parts of the range of this species fail to show any constant geographic variation. It is apparent from the data above, that the two species occur together in the same locality. There is presumably some ecological or habit requirement separating them which remains to be discovered.

306. CHRYSOLAMPIS ELATUS (Linnæus)

Type locality: Cayenne

S. Antonio do Prata (Hellmayr); Pará (Snethlage)

1 ♂ imm., north bank of Amazon near Obidos

307. *PSILOMYCTER THERESIAE THERESIAE* (Da Silva)

Type locality: Pará

Pará (Cabanis and Heine); S. Antonio do Prata (Hellmayr); Sta. Isabel, Rio Xingú, Rio Tapajoz (Snethlage)

7 ♂ 1 ♀, Rio Tapajoz, Pinhy

1 ♂ 2 ♀, Benevides (Carnegie Mus.)

1 ♂, Rio Tapajoz, Villa Braga (do.)

This subspecies ranges up the Amazon to the Rio Madeira and Manaos, replaced westward and northwestward by *leucorrhous* (Sclater and Salvin).

308. *POLYTMUS GUAINUMBI THAUMANTIAS* (Linnæus)

Type locality: Sergipe, northeast Brazil

Marajo Island (Snethlage)

This hummer has a predilection for more open country and is absent from the forested Amazon valley.

309. *TOPAZA PELLA MICRORHYNCHA* Butler

Type locality: Utinga, Pará, Brazil

S. Antonio do Prata, Ipitinga (Hellmayr); Mocajatuba, Apehu, Rio Mojú, Rio Acará (Snethlage); Pará, Castanhã, Rio Muraiteua (Stone)

1 ♀, Pará, Bosque

1 ♀, Benevides (Carnegie Mus.)

Now a very uncommon species, the race unknown outside the localities recorded above.

310. *HELIOTHRIX AURITUS AURITUS* (Gmelin)

Type locality: Cayenne

2 ♀, Obidos (Carnegie Mus.)

311. *HELIOTHRIX AURITUS PHAINOLAEMA* Gould

Type locality: Pará

Igarape-Assu, S. Antonio do Prata, Peixe-Boi (Hellmayr); Pará, Providencia, Rio Gurupy, Rio Tocantins, Rio Janauchim (Snethlage); Rio Inhangapy (Stone)

1 ♂, Rio Tapajoz, Caxiricatuba

1 ♂, Benevides (Carnegie Mus.)

1 ♀, Santarem (do.)

1 ♀, Rio Tapajoz, Aveiros (do.)

The subspecific variation of this species is relatively unusual, as *auriculatus* (Nordmann) not only occurs in Brazil just south of our area, but also in the Amazon valley on the Rio Madeira.

312. ANTHOSCENUS LONGIROSTRIS LONGIROSTRIS

(Audebert and Vieillot)

Type locality: Trinidad

Rio Jamundá, Faro and Rio Tocantins (Snethlage); Santarem (Pinto)

313. CALLIPHLOX AMETHYSTINA (Gmelin)

Type locality: Cayenne

Pará (Stone); S. Antonio do Prata (Hellmayr); Rio Tocantins (Snethlage)

1 ♂ 1 ♀, north bank of Amazon near Obidos

A species of the Guianas and Venezuela, apparently rare in our area, again common southward.

314. LOPHORNIS GOULDII (Lesson)

Type locality: Pará

S. Antonio do Prata (Hellmayr); Providencia, Bragança, Rio Guamá, Rio Tocantins (Snethlage); Utinga (Pinto)

1 ♀, Pará, Bosque

1 ? , Rio Acará, Buenos Aires

1 ♂ imm., Benevides (Carnegie Mus.)

Outside our area this species is definitely known from Maranhao only. The indefinite record "Matto Grosso" by Pelzeln requires confirmation.

315. DISCOSURA LONGICAUDA (Gmelin)

Type locality: Cayenne

S. Antonio do Prata (Hellmayr); Rio Tocantins, Cametá (Snethlage)

Family TROGONIDAE

316. PHAROMACHRUS PAVONINUS VIRIDICEPS

Griscom and Greenway, 1937.

Type locality: Lower Amazon, Brazil

1 ♀, Rio Tapajoz, Tauary

Readily distinguishable from true *paroninus* of far upper Amazonia. The specimen listed above is quite the easternmost locality of record for the species.

317. TROGON COLLARIS Vieillot

Type locality: Cayenne

Rio Jary and Rio Jamauchim (Snethlage); "lower Amazons" (Wallace in Brit. Mus.)

2 ♂ 2 ♀, Rio Tapajoz, Miritituba and Villa Braga (Carnegie Mus.)

To be perfectly clear on vexed matters of nomenclature, this species is the *T. curucui* Linnaeus of Hellmayr and Pinto.

318. TROGON CURUCUI CURUCUI Linnæus

Type locality: Cayenne

Obidos, Rio Jamundá, Faro (Snethlage)

1 ♂, Obidos (Carnegie Mus.)

319. TROGON CURUCUI SULPHUREUS Spix

Type locality: Tabatinga, Rio Solimoes, Brazil

S. Antonio do Prata (Hellmayr); Castanhal (Stone); Rio Guamá, Rio Tapajoz (Snethlage)

3 ♂ 2 ♀, Rio Tapajoz, various localities

1 ♂ 1 ♀, Pará, Bosque

2 ♂, Benevides (Carnegie Mus.)

1 ♂ 2 ♀, Santarem (do.)

2 ♂, Rio Tapajoz (do.)

We adopt Ridgway's nomenclature for the vexed question as to the proper name of this species, and we designate Cayenne as the type locality. We also agree with Ridgway as to the racial variation in this species. Hellmayr in his study of Spix's types (p. 596) has already shown that the bird of southern Brazil should be known as *chrysochlorus* Pelzeln. While endorsing the markedly larger size of the southern bird on the basis of specimens before us, we would also report the narrower bars on the outer tail feathers, both black and white. This results in a 50% increase in the total number of bars per tail feather. In the same paper Hellmayr did not regard *sulphureus* Spix as separable, apparently comparing males only. With a fair series from both Surinam and the Lower Amazon, we agree in finding males inseparable. But there is an excellent difference in the tail feather pattern of females. In Amazonian females the solid black basal por-

tion of the inner web of the outermost rectrix is greatly extended, so that there are 2-3 black bars between the solid black area and the pure white tip. In typical *curucui* the solid black area is reduced, resulting in 5-8 black bars before the white tip is reached. The same relative difference exists on the 2nd and 3rd rectrices from the outermost. Finally we would remark that the female of *chrysochlorus* has a similar tail pattern to *sulphureus*, which furnishes still another distinctive character.

320. TROGON STRIGILATUS STRIGILATUS Linnæus

Type locality: Cayenne

Rio Capim (Wallace and Goeldi); Rio Guamá, Rio Inhangapy (Stone); Ipitinga (Hellmayr); Santarem (Chapman and Riker); throughout (Snethlage); Caviana Island (Brodkorb, as *albiventer* of Envier, on highly dubious characters)

8 ♂ 4 ♀, Rio Tapajoz, various localities

1 ♀, Rio Acará, Acará

1 ♂, Obidos (Carnegie Mus.)

1 ♂, Santarem (do.)

1 ♂ 1 ♀, Rio Tapajoz, Villa Braga (do.)

We have compared this series with a very fine one from Surinam, and find no essential difference between these birds, as well as others from Trinidad, the interior of Venezuela and upper Amazonian Ecuador. Birds from eastern Brazil are, however, an easily recognizable subspecies. Females have greatly reduced white tips to the outer rectrices and there is a marked difference in size; ♀ from Surinam, 140-149 mm., from Bahia, 155-159 mm. Of the various names applied to this Trogon, all are clearly synonyms of true *strigilatus* except *melanopterus* Swainson, which was for a brief period applied to the species as a whole, before the Linnæan names were identified. This name is based on a male collected by Swainson himself while in Brazil. The description is a very brief one and is not subspecifically identifiable. The only possible clue, the length of the wing, is entirely unsatisfactory, as the measurement given is smaller than the smallest Surinam bird in our series. Swainson's travels in Brazil were (1) around Pernambuco, (2) around Bahia, and (3) Rio de Janeiro. It will be apparent, therefore, that the chances are very great that he had the larger east Brazil race. We consequently designate Bahia as a more restricted type locality, and the southern form will be known as *T. strigilatus melanopterus* Swainson.

321. TROGON VARIEGATUS VARIEGATUS Spix

Type locality: Brazil
Cajutuba (Natterer)

The only record for this "campo" form in our area.

322. TROGON VARIEGATUS BOLIVIANUS Grant

Type locality: Cosnipata, Peru
Rio Tapajoz, Goyana on west bank
1 ♀, Rio Tapajoz, Apacy (Carnegie Mus.)

There is still some confusion in the races of *variegatus*. According to Hellmayr, the present form ranges from northern Bolivia to eastern Colombia, east to the Tapajoz. This far outlying station is connected with the rest of the range only by records from Matto Grosso, which Mrs. Naumburg refers to *behni* Gould, a much more austral form according to Hellmayr. It is remarkable that the species should occur at all in our area, and that the only two specimens come from opposite ends of it, and belong to two different subspecies.

323. TROGON VIOLACEUS CRISSALIS (Cabanis and Heine)

Type locality: Bahia, in error
Pará (Goeldi, Brigham, Stone); Ipitinga (Hellmayr); Benevides, Rio Guamá, Rio Tocantins, Rio Xingú, Rio Tapajoz, Rio Jamauchim, Obidos (Snethlage); Santarem (Chapman and Riker)

- 1 ♂ 1 ♀, Rio Tapajoz, Santarem and Caxiricatuba
- 1 ♀, Rio Acará, Acará
- 1 ♂ imm., Santarem (Carnegie Mus.)
- 2 ♂, Rio Tapajoz, Apaçy (do.)
- 1 ♂, Benevides (do.)

The racial variation of this species in eastern Brazil still awaits final determination, and the subspecific name used above is tentative only. The very few records from northeastern Brazil have been called *ramonianus* Deville and Desmurs, a name based on a bird from northeast Peru, and which occurs along the base of the eastern Andes in Ecuador. The birds before us agree with *ramonianus*, and differ from the *violaceus-caligatus* series, in having the blackish, very minutely freckled wing-coverts. They differ from true *ramonianus* of eastern Ecuador in having smaller bills. This is one of the characters assigned by Ridgway to *crissalis* Cabanis and Heine, based on a "Bahia" trade

skin. The character of the relative amount of freckling on the wing coverts is *reversed* in our specimens, so it is apparently worthless. Ridgway saw only one bird from Pará, and assuming that the Bahia bird would not be the same, proposed *goeldii* for the Para bird, should it prove different! The probabilities are, however, that *crissalis* did *not* come from Bahia, as there is no authentic record of the species south of Amazonian drainage. The chances consequently are that the type of *crissalis* will prove to represent lower Amazonian birds, and that Ridgway's *goeldii*, proposed without any proper diagnosis, will be reduced to the synonymy it so richly deserves.

324. TROGON MELANURUS MELANURUS Swainson

Type locality: Guiana

Pará (Natterer, Wallace, Stone); Rio Guamá (Stone); Peixe-Boi and S. Antonio do Prata (Hellmayr); Rio Iriri, Cussary, Monte Alegre, Obidos, Rio Jamundá, Marajo Island (Snethlage); Santarem (Riker and Chapman)

3 ♂ 2 ♀, Amazon river near Obidos, various localities

2 ♂ 1 ♀, Rio Tapajoz, various localities

1 ♂, Obidos (Carnegie Mus.)

2 ♀, Santarem (do.)

5 ♂, Rio Tapajoz, Villa Braga (do.)

Family ALCEDINIDAE

325. CERYLE TORQUATA CYANEA (Vieillot)

Type locality: Paraguay

3 ♀, Rio Tapajoz

1 ♂ 4 ♀, Amazon River near Obidos

1 ♂, Santarem (Carnegie Mus.)

Numerous records throughout the region.

326. CHLOROCERYLE AMAZONA (Latham)

Type locality: Cayenne

2 ♂ 2 ♀, Amazon River near Obidos

3 ♀, Rio Tapajoz

1 ♂, Obidos (Carnegie Mus.)

2 ♂ 2 ♀, Santarem (do.)

Numerous records throughout the region.

327. *CHLOROCERYLE AMERICANA AMERICANA* (Gmelin)

Type locality: Cayenne

- 1 ♀, Amazon River near Obidos
- 3 ♂ 3 ♀, Rio Tapajoz
- 1 ♀, near Pará, Val-de-Caes
- 2 ♂ 2 ♀, Santarem (Carnegie Mus.)
- 3 ♀, Rio Tapajoz, Apagy (do.)

Numerous records throughout the region.

328. *CHLOROCERYLE INDA* (Linnæus)

Type locality: Cayenne

- 3 ♂, Rio Tapajoz, Pinhy
- 1 ♀, Benevides (Carnegie Mus.)

Numerous records throughout, including Caviana Island (Brod-korb).

329. *CHLOROCERYLE AENEA AENEA* (Pallas)

Type locality: Surinam

- 3 ♂ 2 ♀, Amazon River near Obidos
- 5 ♂ 3 ♀, Rio Tapajoz, various localities
- 1 ♀, Obidos (Carnegie Mus.)
- 1 ♀, Benevides (do.)
- 4 ♂ 2 ♀, Rio Tapajoz (do.)
- 1 ♂, Santarem (do.)

Numerous records throughout.

Family MOMOTIDAE

330. *BARYPHTHENGUS MARTII MARTII* (Spix)

Type locality: Pará

Rio Tapajoz, Villa Braga (Snethlage)

- 2 ♂, Rio Tapajoz, Tauary and Caxiricatuba
- 2 ♀, Santarem (Carnegie Mus.)
- 2 ♂ 3 ♀, Rio Tapajoz, various localities (do.)

The right bank of the Rio Tapajoz marks the eastern extension of the range of this species in Brazil. It has been taken on the Rio Purus and the Rio Madeira.

331. *MOMOTUS MOMOTA MOMOTA* (Linnæus)

Type locality: Cayenne

Obidos (Hellmayr, Snethlage, Pinto); Monte Alegre and Rio Jamundá (Snethlage)

5 ♂ 5 ♀, Obidos (Carnegie Mus.)

The north bank of the Amazon marks the southern limit of the typical form.

332. *MOMOTUS MOMOTA PARENSIS* Sharpe

Type locality: Pará

8 ♂ 4 ♀, Pará and Rio Acará

2 ♂ 2 ♀, Benevides (Carnegie Mus.)

Recorded by all collectors from Pará to the right bank of the Rio Tocantins, and extending southward into Maranhao and Piauhý. Its absence from Mexiana and Marajo Islands should be particularly noted. On the left bank of the Rio Tocantins we find *cametensis* Snethlage, which will presumably range west to the right bank of the Rio Xingú. From the Rio Tapajoz west to the Rio Purus, it is replaced by *simplex* Chapman.

333. *MOMOTUS MOMOTA CAMETENSIS* Snethlage

Type locality: Cametá, Rio Tocantins

Rio Tocantins, Cametá and Araumatheua (Snethlage)

3 ♂ 2 ♀, Rio Tocantins, Cametá

These birds are topotypes of *cametensis*, of which Chapman had no specimens when he reviewed the group (Bull. Amer. Mus. Nat. Hist., (48), 1923, p. 45). Three show perfectly the characters ascribed to the race, and are, indeed, astonishingly distinct from *parensis* and *simplex*. Two are indistinguishable from *parensis*, and arouse suspicion as to whether some mislabelling has not occurred.

334. *MOMOTUS MOMOTA SIMPLEX* Chapman

Type locality: Santarem

Santarem (Chapman and Riker, Hellmayr)

8 ♂ 4 ♀, Rio Tapajoz, various localities

5 ♂ 5 ♀, Rio Tapajoz, various localities (Carnegie Mus.)

5 ♂ 7 ♀, Santarem (do., including type)

335. ELECTRON PLATYRHYNCHUM ORIENTALE Todd, 1937

Type locality: Villa Braga, left bank, Rio Tapajoz, Brazil

1 ♂ 1 ♀, type locality (Carnegie Mus.)

At the time Mr. Todd and we were working on the Carnegie Museum collections, all completely overlooked Miranda Ribeiro's description of *chlorophrys* from the Rio Tocantins in Goyaz and Tramagin, Matto Grosso. There is, of course, the possibility that the two subspecies might be the same, but it is impossible to guess from the original diagnosis of *chlorophrys*, the main characters used being true of any immature *Electron* as compared with any adult!

Family GALBULIDAE

336. UROGALBA DEA DEA (Linnæus)

Type locality: Surinam

7 ♂ 3 ♀, Obidos (Carnegie Mus.)

337. UROGALBA DEA AMAZONUM Sclater

Type locality: upper Amazonia

1 ♀, Pará, Bosque

5 ♂ 1 ♀, Rio Tapajoz, various locality

9 ♂ 5 ♀, Benevides (Carnegie Mus.)

1 ♂, Santarem (do.)

12 ♂ 6 ♀, Rio Tapajoz, right bank (do.)

1 ♂ 2 ♀, Rio Tapajoz, left bank (do.)

Recorded throughout our area, except Mexiana and Marajo Islands. These birds differ strikingly from a series of typical *dea* from Surinam in just the respects ascribed to *amazonum*. We have, however, no upper Amazonian material for comparison.

338. GALBULA GALBULA Linnæus

Type locality: Brazil

Obidos (Hellmayr and Snethlage); Rio Jamundá, Monte Alegre, Ereré, Paituna, Rio Maecuru, Rio Jary, Arumanduba, Cunani (Snethlage); Santarem (Chapman and Riker) and Rio Tapajoá (Snethlage)

1 ♂ 3 ♀, north bank of Amazon near Obidos

3 ♂ 3 ♀, Obidos (Carnegie Mus.)

6 ♂ 7 ♀, Rio Tapajoz (do.)

339. *GALBULA RUFOVIRIDIS RUFOVIRIDIS* Cabanis

Type locality: Brazil

Rio Guamá (Stone); Marajo Island, Rio Tocantins, Rio Tapajoz, Rio Jam-auchim (Snethlage); Rio Tocantins (Wallace); Santarem (Chapman and Riker); also Monte Alegre (Snethlage); Caviana Island (Brodkorb).

4 ♂ 2 ♀, Pará (Val-de-Caes)

13 ♂ 7 ♀, Santarem (Carnegie Mus.)

It is quite surprising that there are no previous records of this common Jacamar from the vicinity of Pará. It ranges west to the Rio Madeira.

Snethlage, alone, reports *rufoviridis* from Monte Alegre. One wonders if she did not really have transitional or atypical specimens.

340. *GALBULA ALBIROSTRIS ALBIROSTRIS* Latham

Type locality: Guyana

Obidos (Hellmayr and Snethlage)

9 ♂ 6 ♀, Obidos (Carnegie Mus.)

Obidos is the southern limit of this species, which doubtless occurs elsewhere on the north bank of the Amazon. West of the Rio Negro it is represented by *chalconcephala* Deville.

341. *GALBULA CYANICOLLIS* Cassin

Type locality: Pará

8 ♂ 5 ♀, Rio Tapajoz, various localities

3 ♂ 1 ♀, Pará, Val-de-Caes

6 ♂ 5 ♀, Santarem (Carnegie Mus.)

6 ♂ 4 ♀, Rio Tapajoz (do.)

Recorded by all collectors throughout our area on the south side of the Amazon, but absent on Mexiana and Marajo Islands. It ranges westward to the Rio Jurua and Rio Purus.

342. *GALBULA LEUCOGASTER LEUCOGASTER* Vieillot

Type locality: Guiana

Rio Maccuru, Cachoeira (Snethlage)

This species has never been recorded from the south bank of the Amazon, where it is represented by the recently described form below.

343. *GALBULA LEUCOGASTER VIRIDISSIMA*

Griscom & Greenway, 1937

Type locality: Rio Tapajoz, Pinhy

3 ♂ 1 ♀, type locality

2 ♂ 1 ♀, Rio Tapajoz, both banks (Carnegie Mus.)

As shown in the original description *chalcothorax* is merely another representative form of this species.

344. *BRACHYGALBA LUGUBRIS LUGUBRIS* (Swainson)

Type locality: Brazil

Monte Alegre, Rio Maecuru, Rio Acara (Snethlage); Rio Tocantins (Wallace and Snethlage)

2 ♂ 2 ♀, Pará, Val-de-Caes

Until very recently a very little known bird in Brazil. So far as we know adequate series from Guiana and Brazil have never been compared.

345. *BRACHYGALBA LUGUBRIS MELANOSTERNA* Sclater

Type locality: Goyaz

Rio Curua (Snethlage)

This record, just within our limits, marks the extreme northern limit of the subspecies, which ranges from central Brazil southward. In fact typical *lugubris* ranges south of the Rio Curua, further eastward in Parnahyba. Both forms are represented by *fulviventris* in Amazonian Colombia and Ecuador. The species has yet to be collected in the intervening area, but it is sufficiently rare so that the negative evidence to date is by no means conclusive.

[*Brachygalba albigularis* (Spix) was described as from "*sylvia ad urbem Param*". With the exception of the type the only specimens come from the Rio Javari (Bates) and the Rio Purus (Snethlage). There is no reason to suppose that "Pará" is really correct.]

346. *JACAMEROPS AUREA AUREA* (P.L.S. Müller)

Type locality: Guiana

Peixe-Boi (Hellmayr); Rio Capim (Wallace); Rio Guama, Rio Acará, Rio Tapajoz (Snethlage); Pataua (Pinto)

1 ♀, Rio Tapajoz, Pinhy

4 ♂ 2 ♀, Obidos (Carnegie Mus.)

1 ♂, Benevides (do.)

1 ♂ 4 ♀, Santarem (do.)

6 ♂ 1 ♀, Rio Tapajoz, left bank (do.)

1 ♂, Rio Tapajoz, Miritituba (do.)

There is no appreciable difference between Brazil and Guiana specimens. As usual, birds from upper Amazonia are notably larger, and the name *isidori* Deville based on a bird from Sarayacu, north-eastern Peru is available, in spite of the fact that the type is a melanoid. Curiously enough a female from Mt. Duida is inseparable from the type of *penardi* Bangs and Barbour from Costa Rica.

Family BUCCONIDAE

347. BUCCO CAPENSIS Linnæus

Type locality: Guiana

Pará (Wallace, Snethlage, Stone); Castanhal (Stone); Peixe-Boi (Hellmayr)

1 ♂, Rio Tapajoz, Caxiricatuba

1 ♀, Obidos (Carnegie Mus.)

1 ♂ 2 ♀, Santarem (do.)

2 ♂ 1 ♀, Rio Tapajoz, Villa Braga, Apaçy (do.)

348. NOTHARCUS MACRORHYNCHUS PARAENSIS Sassi

Type locality: Pará

Pará (Layard, Natterer, Wallace, Snethlage, Stone); Cajutuba (Natterer);

Rio Capim (Goeldi); Rio Tocantins (Sassi)

3 ♂ 2 ♀, Santarem (Carnegie Mus.)

These birds have notably bigger bills than those from the left bank of the Rio Tapajoz, agreeing with the measurements of Pará birds.

349. NOTHARCUS MACRORHYNCHUS HYPERRHYNCHUS (Sclater)

Type locality: upper Amazonia

1 ♂ 1 ♀, Rio Tapajoz, Itaituba (Carnegie Mus.)

Apparently the upper Amazonian representative of *macrorhynchus* of Guiana, which reaches the Amazon only at Manaos, of which *giganteus* Pelzeln from Marabitanas, Rio Negro, is presumably a synonym.

350. NOTHARCUS ORDII Cassin

Type locality: Venezuela

Rio Cussary (fide Snethlage)

351. *NOTHARCUS TECTUS TECTUS* (Boddaert)

Type locality: Cayenne

Pará (Layard, Natterer, Wallace, Stone); Igarape-Assu and San Antonio do Prata (Hellmayr); Santarem (Chapman and Riker); Rio Guamá, Marajo Island, Monte Alegre, Obidos, Rio Jamundá, Rio Tocantins (Snethlage)

7 ♂ 2 ♀, Obidos (Carnegie Mus.)

2 ♂ 2 ♀, Benevides (do.)

6 ♂ 5 ♀, Santarem (do.)

2 ♂ 1 ♀, Rio Tapajoz, Apaçy, Itaituba, Villa Braga (do.)

Birds from the south bank of the Amazon differ from Cayenne topotypes in having minutely longer bills, which are also a little broader at the base.

352. *NOTHIARCHIUS MACRODACTYLUS MACRODACTYLUS* (Spix)

Type locality: Fonte Boa, Rio Solimoës, by subs. design.

1 ♂, Obidos (Carnegie Mus.)

353. *NYSTACTES TAMATIA TAMATIA* Gmelin

Type locality: Cayenne

Amapa, Arumanduba, Monte Alegre, Ereré, Rio Maecuru, Obidos (Snethlage)

1 ♂ 1 ♀, Obidos (Carnegie Mus.)

354. *NYSTACTES TAMATIA* subsp.

1 ♂ 2 ♀, Rio Tapajoz, left bank, Villa Braga

Surprisingly close to typical *tamatia* in coloration and consequently sharply distinct from *hypnaleus*; resembling the latter, however, in the shorter and slenderer bill, a marked character of that race in good series.

Presumably Hellmayr's record of typical *tamatia* from the *right* bank of the Rio Madeira belongs here also. A series from the Rio Purus has the pale throat of *pulmentum* Sclater, but is not heavily spotted. Very fine series from the Solimoës presumably represent *pulmentum*. There is the possibility that these birds might represent *interior* Cherrie and Reichenberger.

355. *NYSTACTES TAMATIA HYPNALEUS* Cabanis and Heine

Type locality: Pará

Pará (Natterer); Ipitinga and Rio Acará (Hellmayr) Rio Capim (Wallace); Santarem (Chapman and Riker, Pinto); Rio Tocantins and Rio Tapajoz (Snethlage)

1 ♂ 3 ♀, Pará, Val-de-Caes

2 ♀, Rio Tapajoz, Tauary

12 ♂ 7 ♀, Santarem (Carnegie Mus.)

The four Pará birds are topotypes and are by no means as distinct in color from a good series of typical *tamatia*, as Hellmayr's comments would lead one to infer (cf. Novit. Zool., 1910, p. 391), as three have the black apical breast spots *minutely* larger than the great majority of our *tamatia* series. The 21 birds from the Rio Tapajoz are obviously more heavily marked with black below and very distinct.

356. *NYSTALUS MACULATUS MACULATUS* (Gmelin)

Type locality: Brazil

Marajo Island and Rio Tapajoz (Snethlage); Santarem (Chapman and Riker); Caviana Island (Brodkorb)

9 ♂ 9 ♀, Rio Tapajoz, various localities

9 ♂ 7 ♀, Santarem (Carnegie Mus.)

This species is really at the extreme northern limit of its range on the south bank of the Amazon. It is quite variable, there being two other races in Brazil.

357. *NYSTALUS STRIOLATUS* (Pelzeln)

Type locality: Engenho do Cap Gama

S. Antonio do Prata (Hellmayr and Snethlage); Rio Inhangapy (Stone); Rio Guamá (Stone, Snethlage)

At present this species has a curiously interrupted distribution, the Pará records being quite removed from the balance of the bird's known range in upper Amazonia.

358. *MALACOPTILA FUSCA* (Gmelin)

Type locality: Cayenne

Obidos (Snethlage, Pinto)

6 ♂ 2 ♀, Obidos (Carnegie Mus.)

359. *MALACOPTILA RUFA BRUNNESCENS* Zimmer

Type locality: Caxiricatuba, Rio Tapajoz

Santarem (Chapman and Riker); various localities from the Rio Madeira to the right bank of the Rio Tapajoz (Zimmer)

2 ♂ 6 ♀, Rio Tapajoz, various localities

2 ♂ 3 ♀, Santarem (Carnegie Mus.)

10 ♂ 9 ♀, Rio Tapajoz (do.)

360. *MALACOPTILA RUFA* subspecies

Pará (Natterer, Wallace); S. Antonio do Prata (Hellmayr); Rio Inhangapy (Stone); Rio Capim (Goeldi); Peixe-Boi (Hellmayr; also numerous localities near Pará, the Rio Tocantins and the Rio Xingú (Snethlage)

For the latest comment on this species cf. Zimmer, Amer. Mus. Novit., no. 500, 1931, pp. 3-7. He there advances reasons for supposing that more than one form of the species may inhabit the region between the Tapajoz and Pará.

361. *MONASA ATRA* (Boddaert)

Type locality: Cayenne

Maracá, Cunany, Rio Jary, Obidos, Rio Jamundá (Snethlage); Obidos (Hellmayr)

1 ♂ 2 ♀, near Obidos

362. *MONASA MORPHEUS MORPHEUS* (Hahn and Küst)

Type locality: Brazil

1 ♀, Pará, Val-de-Caes

1 ♂, Rio Acará, Acará

8 ♂ 6 ♀, Rio Tapajoz, various localities

2 ♀, Benevides (Carnegie Mus.)

11 ♂ 9 ♀, Santarem (do.)

6 ♂ 13 ♀, Rio Tapajoz (do.)

Numerous records from every part of our area south of the Amazon, except Mexiana and Marajo Islands.

We are quite unable to recognize *rikeri* Ridgway from Diamantina and Santarem. Whether the malar apex is black or white is an individual variation in not only the series listed above, but in another modern one from Bahia. The same character has been shown to break down in certain alleged Panama species.

363. *MONASA NIGRIFRONS NIGRIFRONS* (Spix)

Type locality: Rio Solimões

- 3 ♂ 1 ♀, Rio Amazonas, near Obidos
- 8 ♂ 1 ♀, Rio Tapajoz, various localities
- 12 ♂ 7 ♀, Santarem (Carnegie Mus.)
- 7 ♀, Rio Tapajoz (do.)
- 2 ♂ 2 ♀, Obidos (do.)

Numerous records throughout our area.

364. *NONNULA RUBECULA SIMPLEX* Todd, 1937

Type locality: Villa Braga, Rio Tapajoz

- 1 ♂, the type, examined (Carnegie Mus.)

Replaced by *cineracea* Sclater on the Rio Madeira.

365. *CHELIDOPTERA TENEBROSA TENEBROSA* (Pallas)

Type locality: Surinam

- 2 ♂, Pará, Val-de-Caes
- 1 ♂, Rio Acará, Acará
- 3 ♂ 2 ♀, Rio Tapajoz, various localities
- 1 ♂ 1 ♀, Benevides (Carnegie Mus.)
- 7 ♂, Rio Tapajoz, Apaçy (do.)

Numerous records throughout.

We agree with Hellmayr that birds from the south bank of the Amazon are inseparable from a Surinam series and show no approach to the radically larger and paler *brasiliensis* of eastern and southern Brazil. Wing measurements of males of true *tenebrosa* are 101–108, of *brasiliensis*, 114–116. Properly sexed modern series show that females are decidedly larger than males, a Surinam series, 105–111 mm. There is also a remarkable change in bill length and bill proportions with maturity. Younger birds have much shorter and broader bills, and old adults have not only longer bills, but a long subulate tip or terminal half, entirely lacking in younger stages. Two males from the upper Amazon in northeastern Peru and eastern Ecuador are *tenebrosa* in color, but are as usual larger, 108–113 mm. Should this size difference prove constant in series, the bird of upper Amazonia should be described. There is one very remarkable specimen in the museum collection from Alagoas, Maceio, on the coast 60 miles south of Pernambuco, collected by Newton Dexter. This bird is unsexed, but the wing measures 123 mm. Even assuming that it must be a female, it is gigantic, and strongly indicates the need of further material from this neglected corner of Brazil.

Family CAPITONIDAE

366. *CAPITO BRUNNEIPECTUS* Chapman

Type locality: Villa Braga, left bank of Rio Tapajoz

1 ♀, Rio Tapajoz, Villa Braga (Carnegie Mus.)

First known from four specimens collected by Snethlage at the type locality, and sent to the American Museum for determination (cf. Chapman, Amer. Mus. Novit., no. 2, 1921, p. 1). It marks the easternmost point reached by the genus. This species and *C. dayi* Cherrie of the Rio Madeira represent the upper Amazonian *C. auratus* Dumont, a variable species recently monographed by Chapman (Amer. Mus. Novit. no. 335). In particular the relationships of *C. dayi* to birds from the Rio Madeira, which Hellmayr (1910, p. 395) reported provisionally as *C. auratus intermedius* Berlepsch and Hartert, and which are possibly *A. auratus insperatus* Cherrie, should be investigated.

367. *CAPITO NIGER* (P.L.S. Müller)

Type locality: Cayenne

Obidos and Rio Jamundá, Faro (Snethlage)

Family RAMPHASTIDAE

368. *RAMPHASTOS TOCO TOCO* (P.L.S. Müller)

Type locality: Cayenne

Mexiana Island (Wallace, Hagmann); Marajo Island and Monte Alegre (Snethlage); Pataua (Pinto)

2 ♂ 2 ♀, Pará, Val-de-Caes

3 ♀, Santarem (Carnegie Mus.)

Lower Amazon birds do not differ from a Cayenne series in the Carnegie Museum. In life *toco* has the bill uniform orange except for the black areas, the ridge of both mandible and maxilla crimson. In dried museum skins the bill fades to a uniform dull yellow, the ridges crimson or orange. Two specimens recently killed on the Rio Iguassu, Paraguay, are remarkable in having the maxilla largely crimson instead of orange, orange only for a narrow black band just forward of the black base; the crimson color increases in intensity and depth towards the tip of the bill. Birds from Sao Paulo are strikingly distinct in having the pure white throat untinged with yellow and constitute a

recognizable race, *albogularis* Cassin. Some birds from Sao Paulo and others from Goyaz are identical with Paraguayan birds in coloration of the bill, while the Paraguayan birds approach *albogularis* in other respects. Specimens from Bolivia in the Carnegie Museum do not show the bill characters of the Paraguayan birds and are inseparable from *toco*.

369. RAMPHASTOS TUCANUS TUCANUS Linnæus

Type locality: Cayenne

Amapá and Rio Jamundá (Snethlage); Pará (Natterer, Stone, Wallace); Igarape-assu, Peixe-Boi, and Ipitinga (Hellmayr); Rio Capim (Goeldi); Providencia and Sta. Isabel (Snethlage). Birds from the Rio Xingú (Zimmer), and the Rio Tocantins (Snethlage) approach the next race. Obidos, Murutucu, Pará region (Pinto)

- 1 ♀, Rio Acará, Acará
- 1 ♂, Obidos (Carnegie Mus.)

370. RAMPHASTOS TUCANUS OBLITUS Griscom & Greenway, 1937

Type Locality: Rio Tapajoz, Tauary
Santarem (Pinto)

- 1 ♂ (the type, M. C. Z.)
- 3 ♂ 1 ♀, Santarem (Carnegie Mus.)

This well marked intermediate form will presumably range at least as far east as the left bank of the Rio Xingú. It must be remembered that Pará specimens, while referable to typical *tucanus*, approach this race in having deeper colored under tailcoverts. The distinctness of *oblitus* is best evident when Cayenne topotypes of *tucanus* are used in comparison.

371. RAMPHASTOS TUCANUS CUVIERI Wagler

Type locality: Borba, Rio Madeira, by subsequent designation
Itaituba, left bank of Rio Tapajoz (Snethlage)

- 1 ♀ imm., Boim, Rio Tapajoz.

372. RAMPHASTOS VITELLINUS VITELLINUS Lichtenstein

Type locality: Cayenne

Cunany, Obidos, Rio Jamundá (Snethlage); Obidos (Pinto)

- 1 ♀, Obidos (Carnegie Mus.)

373. *RAMPHASTOS VITELLINUS ARIEL* Vigors

Type locality: Rio de Janeiro

Numerous records from south side of the Amazon, except the islands

2 ♂ 1 ♀, Rio Acará, Acará

1 ♂ 2 ♀, 1? Rio Tapajoz various localities, both banks.

2 ♂ 3 ♀, Benevides (Carnegie Mus.)

1 ♂, Santarem (do.)

1 ♂ 2 ♀, Rio Tapajoz (do.)

This toucan is clearly a mere subspecies of the Guiana *vitellinus*, which it represents on the south side of the Amazon southward to eastern Brazil. It is specifically distinct from *culminatus* in having the ridge of the culmen *black*, concolor with the side of the bill, and occurs together with the *culminatus-osculans* group and the *tucanus* group in one or another part of their ranges. While we appreciate Zimmer's comments on the variations in the color of throat and upper tail coverts, we feel that the two facts mentioned above should have weight, until evidence to the contrary materializes.

374. *PTEROGLOSSUS ARACARI ARACARI* (Linnaeus)

Type locality: Northeastern Brazil, ex Marcgrave

Numerous records from Marajo Island and Pará to the right bank of the Madeira

1 ♀, Rio Acará, Acará

2 ♂ 1 ♀, Santarem (Carnegie Mus.)

2 ♂ 2 ♀, Rio Tapajoz, left bank (do.)

3 ♂ 4 ♀, do., right bank (do.)

A fair series from Bahia and Rio de Janeiro differ only in averaging minutely paler yellow below. In Sao Paulo we find the very distinct *vergens* Griscom and Greenway, which in color characters approaches *castanotis australis* Cassin so remarkably. Were it not for the fact that these two birds occur together at Valparaiso, Sao Paulo, we should have been inclined to think that *castanotis*, *mariae*, *azarac*, and *aracari* were conspecific.

375. *PTEROGLOSSUS ARACARI ATRICOLLIS* (P.L.S. Müller)

Type locality: Brazil in error; Cayenne by Bangs and Penard, 1918

Maracá, Monte Alegre, Obidos (Snethlage)

9 ♂ 2 ♀, north bank of Amazon near Obidos

2 ♂ 3 ♀, Obidos (Carnegie Mus.)

A fine series of Cayenne topotypes in the Carnegie Museum shows that birds from the north bank of the Amazon are *atricollis*. This race

differs from typical *aracari* in having a broad black culminal stripe, and the breast is sulphur to orange yellow instead of lemon yellow.

We have here a further illustration of the rashness of assuming that the "Guianas" (all three colonies) are necessarily a homogeneous unit. Eight specimens from Paramaribo, Surinam, before us are immediately separable from *atricollis* in having lemon yellow breasts as in typical *aracari*, and the thighs more olive, less ochraceous brown. Two birds from eastern Venezuela agree with these Surinam birds. There is every possibility that this subspecies, by pure chance, will have to be known as *roraimae* Brabourne Chubb, a name originally proposed on purely nomenclatural but invalid grounds!

There would appear to be another misunderstanding of nomenclature. Pinto (1938, p. 329, footnote) has claimed that *wiedii* Sturm, 1847, is an earlier name for *vergens* Griscom and Greenway. In the first place, birds from Wied's collecting area, from Bahia south to Rio de Janeiro are typical *aracari*; hence Wied cannot have collected *vergens* a southern race from Sao Paulo. In the second place, the plate and description of *wiedii* Sturm is an excellent characterization of true *aracari*. Gould (Monog. Toucans, 2nd ed., 1854) took up *wiedii* Sturm. His plate and description show clearly that the differences between *aracari* and *wiedii* are exactly the differences between Guiana and Brazil specimens of *aracari*. In other words, Gould and Sturm thought of *aracari* as a Guiana bird, now *aracari atricollis*, and *wiedii*, the east Brazil bird, is a synonym of true *aracari*, originally based on a Maregrave specimen ex northeast Brazil. There are two races of this species in Brazil.

376. PTEROGLOSSUS BITORQUATUS BITORQUATUS Vigors

Type locality: none given: we suggest Pará

Pará (Natterer and Wallace); S. Antonio do Prata and Ipitinga (Hellmayr); Rio Capim (Goeldi); Ourem (W. A. Schulz); Providencia and Benevides (Snethlage); Utinga (Pinto)

1 ♀, Rio Acará, Acará

377. PTEROGLOSSUS BITORQUATUS REICHENOWI Snethlage

Type locality: Monte Alegre, north bank of Amazon, apparently in error; this locality questioned in Aves do Amazonas

Rio Tocantins, Cametá and Rio Jamauchim, Sta. Helena (Snethlage); Santarem (Chapman and Riker); Santarem (Pinto)

9 ♂ 8 ♀, Santarem (Carnegie Mus.)

An obvious representative of *bitorquatus*, differing only in the absence of the narrow yellow pectoral band. A specimen in the M.C.Z. with no original label is labelled "Marajo Island," a locality which cannot possibly be correct, as the genus is unknown on the open campos of this island.

378. PTEROGLOSSUS BITORQUATUS STURMI Natterer

Type locality: Borba, Rio Madeira

1 ♀, Rio Tapajoz, Miritituba (Carnegie Mus.)

1 ♂ 1 ♀, (do.) , Apaçy (do.)

2 ♂ 1 ♀, (do.) , Villa Braga (do.)

379. PTEROGLOSSUS VIRIDIS INSCRIPTUS Swainson

Type locality: Guiana in error

Pará (Layard, Natterer, Stone, Wallace); Ipitinga (Hellmayr); Rio Inhangapy (Stone); Santarem (Chapman and Riker, Hellmayr); Providencia, Benevides, St. Antonio do Prata, Rio Guamá, Rio Mojú; Rio Tocantins, Rio Tapajoz (Snethlage)

2 ♂ 2 ♀, Benevides Carnegie Mus.)

8 ♂ 5 ♀, Santarem (do.)

1 ♂, Rio Tapajoz, Villa Braga (do.)

Replaced by *P. humboldti* Wagler from the Rio Madeira westward.

380. PTEROGLOSSUS VIRIDIS VIRIDIS (Linnæus)

Type locality: Cayenne

Maracá, Obidos, Rio Jamundá (Snethlage); Obidos (Pinto).

6 ♂, 2 ♀, Obidos (Carnegie Mus.)

The southern limit of this species is apparently the north bank of the Amazon. It is replaced by *didymus* Selater in far upper Amazonia. This race and *humboldti* bridge the gap between *viridis* and *inscriptus*.

381. SELENIDERA MACULIROSTRIS GOULDI (Natterer)

Type locality: Pará

Pará (Layard, Natterer, Stone, Wallace); Igarape-Assu and Ipitinga (Hellmayr); Rio Capim (Goeldi); Providencia, Rio Mojú (Snethlage).

1 ♂ 1 ♀, Pará, Val-de-Caes and Bosque

1 ♀, Rio Acará, Acará

Birds from the Rio Tocantins (Snethlage) may be this form or the next.

382. *SELENIDERA MACULIROSTRIS* HELLMAYRI Griscom & Greenway,
1937

Type locality: Rio Tapajoz, Boim

Santarem, Itaituba (Pinto)

1 ♂ 1 ♀, Rio Tapajoz, Boim and Tauary.

3 ♀, Santarem (Carnegie Mus.)

2 ♂ 2 ♀, Rio Tapajoz, left bank (do.)

383. *SELENIDERA CULIK* (Wagler)

Type locality: Cayenne

Obidos (Hellmayr), Obidos (Pinto)

6 ♂ 2 ♀, Obidos (Carnegie Mus.)

Family PICIDAE

384. *COLAPTES CAMPESTRIS CHRYSOSTERNUS* (Swainson)

Type locality: the Sertao of Bahia

Monte Alegre (Snethlage)

Birds from this isolated colony on the north bank of the Amazon should be compared with typical material from much further south.

385. *PICULUS CHRYSOCHLOROS PARAENSIS* (Snethlage)

Type locality: Pará

Murutucu (Hagmann, Snethlage); Pará (Snethlage)

1 ♀, Rio Tapajoz, Caxiricatuba

1 ♀, Santarem (Carnegie Mus.)

Recorded west to the right bank of the Rio Tapajoz, but very few specimens exist. The closely allied race *capistratus* (Malherbe) has been found at Manaus, and should be sought on the north bank of the Amazon in our area.

386. *PICULUS CHRYSOCHLOROS HYPOCHRYSEUS* Todd, 1937

Type locality: Arima, Rio Purus, Brazil

2 ♂ 1 ♀, Rio Tapajoz, Villa Braga and Miritituba (Carnegie Mus.)

387. *PICULUS FLAVIGULA FLAVIGULA* (Boddaert)

Type Locality: Cayenne

Rio Jary, Rio Jamundá (Snethlage); Obidos (Hellmayr)

3 ♂, Obidos (Carnegie Mus.)

388. *PICULUS FLAVIGULA MAGNUS* (Cherrie and Reichenberger)

Type locality: Monte Christo, Matto Grosso

Numerous records throughout the area south of the Amazon by all collectors; absent on Mexiana and Marajo Islands

1 ♀, Pará, Bosque

1 ♂ 2 ♀, Rio Tapajoz, Tauary and Caxiricatuba

1 ♂, Benevides (Carnegie Mus.)

2 ♂ 1 ♀, Santarem (do.)

2 ♂, 1 ♀, Rio Tapajoz, Villa Braga (do.)

A puzzling series of intermediates, which we have compared with a good series of true *flavigula* from Guiana and the type, and two other recorded specimens of *magnus* in the American Museum of Natural History. One Pará bird is inseparable from true *flavigula*. The Rio Tapajoz birds agree perfectly in longer wing with *magnus*, but have slightly smaller and weaker bills. All birds seen from south of the Amazon differ from true *flavigula* in having the olive green of the underparts a slightly paler shade.

389. *CHRYSOPTILUS MELANOCHLOROS MARIAE* Hargitt

Type locality: Chamicuros, east Peru in error; actually Marajo Island
Marajo Island (Hagmann and Snethlage)

This race of the very variable *malanochloros* of eastern and southern Brazil is otherwise known only from a small island off the coast of Maranhao.

390. *CHRYSOPTILUS PUNCTIGULA PUNCTIGULA* (Boddaert)

Type locality: Cayenne

Amapá, Monte Alegre, Paituna, Rio Jamundá (Snethlage); Lago Cuipeua (Pinto)

3 ♂ 2 ♀, Obidos (Carnegie Mus.)

The Obidos birds agree perfectly with a fine series from Cayenne and Surinam.

391. *CHRYSOPTILUS PUNCTIGULA PALLIDIOR*

Griscom & Greenway, 1937

Type locality: Amazon River, Lago Grande

Santarem (Chapman and Riker, Pinto); Lago Grande (Pinto)

1 ♂ 5 ♀, Lago Grande

7 ♂ 7 ♀, Santarem (Carnegie Mus.)

The few records of this species from our area have always been called *guttatus* (Spix), a subspecies which is still credited with too extensive a range for so variable a bird. Hellmayr has shown that Spix's type agrees with a Natterer specimen from Manaus. This subspecies, unknown to us from topotypes, differs from *punctigula* only in those respects in which *pallidior* and *punctigula* are alike.

392. LEUCONERPES CANDIDUS (Otto)

Type locality: Cayenne *errore*

Mexiana Island (Hagmann, Snethlage); Marajo Island, Monte Alegre, Paituna (Snethlage); Lago Cuipeua (Pinto)

3 ♂ 4 ♀, near Obidos

1 ♂ 1 ♀, Obidos (Carnegie Mus.)

3 ♂ 3 ♀, Santarem (do.)

393. TRIPSURUS CRUENTATUS CRUENTATUS (Boddaert)

Type locality: Cayenne

Pará region (numerous records); Rio Tocantins (Pinto); Santarem and Rio Tapajoz (all collectors)

1 ♂ 1 ♀, Rio Tapajoz, Tauary

3 ♂, Benevides (Carnegie Mus.)

1 ♂, Santarem (do.)

394. TRIPSURUS CRUENTATUS EXTENSUS Todd, 1937

Type locality: Arima, Rio Purus

3 ♂ 2 ♀, Rio Tapajoz, left bank, Villa Braga, Apaçy, Miritituba, (Carnegie Mus.)

Birds from the Rio Tapajoz are intermediates between these two subspecies, but those from the left bank are on the whole nearer *extensus*.

395. TRIPSURUS RUBRIFRONS (Spix)

Type locality: Pará

Pará region, numerous records (all collectors)

1 ♂, Benevides (Carnegie Mus.)

Mr. Todd (1937, pp. 250-251) has recently commented on the curious relationships between *cruentatus* and *rubrifrons*. The former of these supposed species is common and wide ranging; the latter is

restricted to the Guianas and the Pará region. In the Guianas, *rubrifrons* is definitely commoner than *cruentatus*. As regards external differences, *rubrifrons* might be described as a *cruentatus* which has lost the white postocular stripe and the yellow nuchal collar. Now the collections in the Carnegie Museum show clearly various types of intermediates. Some have no nuchal collar, others have no superciliary or it is incomplete. We are obviously dealing with hybrids between two species, or *rubrifrons* is a color phase of *cruentatus*, localized in a portion only of the latter's range. Mr. Todd inclines to the hybrid theory largely on the ground that the characters of *cruentatus* are so constant over the greater part of its extensive range. Our own idea is that *rubrifrons* is an imaginary species, a mere color phase of *cruentatus*, which is losing its white postocular and yellow nuchal collar in the northeastern portion of its range. The chief arguments against the hybrid theory are that there is no region where only *rubrifrons* occurs, and its characters are purely negative.

396. VENILIORNIS PASSERINUS PASSERINUS (Linnæus)

Type locality: Cayenne

Cussary, Amapá, Monte Alegre, Rio Maecuru, Obidos (Snethlage)

1 ♂, Obidos (Carnegie Mus.)

397. VENILIORNIS PASSERINUS subspecies

Mexiana and Marajo Islands (Snethlage, Hellmayr)

1 ♀, Santarem

5 ♂ 2 ♀, do. (Carnegie Mus.)

Apparently no adequate series from the south bank of the Amazon has ever been reported on. Our birds are quite different from a great series from Cayenne in the Carnegie Museum in being a more golden brown, both above and below. They appear to be intermediate between *passerinus* and *taenionotus* (Reichenbach) in size and color. Our material of this latter form and *transfluvialis* Hellmayr is inadequate; both occur in Piahy and the latter in Maranhao, very close to our area, where Marajo Island birds might belong. Snethlage records *taenionotus* and *passerinus* as distinct species and occurring together in the same place. The characters formerly used to separate these alleged "species" were, however, chiefly matters of individual variation.

398. *VENILIORNIS AFFINIS CASSINI* (Malherbe)

Type locality: Cayenne, by subsequent designation

Rio Jary, Monte Alegre, Obidos, Rio Jamundá (Snethlage)

2 ♂ 4 ♀, Obidos (Carnegie Mus.)

399. *VENILIORNIS AFFINIS RUFICEPS* (Spix)

Type locality: Amazon River

Pará (Layard, Natterer, Stone); Peixe-Boi and Ipitinga (Hellmayr); Rio Murateua (Stone); Rio Capim (Goeldi); Santarem (Chapman and Riker, Hellmayr); Marajo Island, Rio Tocantins, Rio Iriri and Rio Tapajoz (Snethlage)

13 ♂ 7 ♀, Rio Tapajoz, various localities east bank

2 ♂ 1 ♀, Benevides (Carnegie Mus.)

7 ♂ 6 ♀, Santarem (do.)

3 ♂ 1 ♀, Rio Tapajoz, both banks (do.)

Typical *affinis* occurs in southern and eastern Brazil. On the Rio Madeira westward, we encounter *haematostigma* (Malherbe), which is a composite of several subspecies.

400. *CELEUS FLAVESCENS OCHRACEUS* (Spix)

Type locality: Amazon River

Santarem (Chapman and Riker); Cussary, Monte Alegre (Snethlage); Obidos (Hellmayr); Marajo Island (Pinto)

2 ♂ 1 ♀, near Obidos

5 ♂ 1 ♀, Rio Tapajoz, various localities

3 ♂ 3 ♀, Obidos (Carnegie Mus.)

8 ♂ 5 ♀, Santarem (do.)

401. *CELEUS ELEGANS ELEGANS* (P.L.S. Müller)

Type locality: Cayenne

Obidos (Hellmayr); Cunany, Rio Jamundá (Snethlage); Obidos (Pinto).

2 ♂ 5 ♀, Obidos (Carnegie Mus.)

402. *CELEUS JUMANA JUMANA* (Spix)

Type locality: in sylvis Amazonum

Pará (Layard, Wallace, Stone, Natterer); Muria (Natterer); Rio Capim (Goeldi); Utinga, Ipitinga, Igarape-assu (Hellmayr); S. Antonio do Prata, Sta. Isabel, Rio Tocantins, Rio Tapajoz (Snethlage); Santarem (Hellmayr)

3 ♀, Pará, Val-de-Caes

2 ♂ 2 ♀, Rio Tapajoz, various localities

1 ♂, Benevides (Carnegie Mus.)

5 ♂ 2 ♀, Santarem (do.)

3 ♂ 3 ♀, Rio Tapajoz, Apaçy (do.)

403. *CELEUS UNDATUS MULTIFASCIATUS* (Mallherbe)

Type locality: Brazil

Pará (Natterer, Stone); Ipitinga (Hellmayr); Ananindeua, Maguary, S. Antonio do Prata, Rio Tocantins (Snethlage)

2 ♂ 2 ♀, Benevides (Carnegie Mus.)

404. *CELEUS GRAMMICUS SUBCERVINUS* Todd, 1937

Type locality: Rio Tapajoz, Villa Braga

1 ♂ 1 ♀, Santarem (Carnegie Mus.)

2 ♂ 2 ♀, Rio Tapajoz, Villa Braga (do.)

This species is recorded from Cussary (Snethlage), but there is no telling what subspecies it may prove to be; possibly typical *grammicus*.

405. *CROCOMORPHUS FLAVUS FLAVUS* (P.L.S. Müller)

Type locality: Cayenne

Amapá, Rio Jamundá, Faro (Snethlage)

406. *CROCOMORPHUS FLAVUS INORNATUS* Cherrie

Type locality: Santarem, Rio Tapajoz

Pará (Natterer, Stone); numerous records near city (Snethlage); Marajo Island (Snethlage); Cussary (Snethlage); Santarem (Chapman and Riker)

1 ♀, Pará, Val-de-Caes

3 ♂ 4 ♀, Rio Tapajoz, various localities.

2 ♂, Benevides (Carnegie Mus.)

4 ♂ 5 ♀, Santarem (do.)

2 ♂ 2 ♀, Rio Tapajoz, Villa Braga (do.)

Our series shows that this race is phenomenally variable. Six specimens only have no rufous on the outer webs of the secondaries and wing-coverts. The balance have more or less, and are indistinguishable from Cayenne topotypes. Two only are devoid of the extensive white spotting on the upper wing. Several are inseparable from true *flavus* in this respect, and all the remainder have some.

407. *CERCHNEIPICUS TORQUATUS* (Boddaert)

Type locality: Cayenne

1 ♂, Obidos (Carnegie Mus.)

408. *CERCHNEIPICUS TINNUNCULUS ANGUSTUS*

Griscom & Greenway, 1937

Type locality: Rio Tapajoz, Caxiricatuba

Rio Mojú, Cussary, Rio Tapajoz, Boim (Snethlage)

1 ♂, Rio Tapajoz, Caxiricatuba (M.C.Z.)

3 ♂ 1 ♀, Santarem (Carnegie Mus.)

409. *SCAPANEUS RUBRICOLLIS RUBRICOLLIS* (Boddaert)

Type locality: Cayenne

1 ♂ 2 ♀, Obidos (Carnegie Mus.)

410. *SCAPANEUS RUBRICOLLIS TRACHELOPYRUS* (Malherbe)

Type locality: Peru

Numerous records throughout our area on the south side of the Amazon.

2 ♀, Pará, Val-de-Caes

10 ♂ 1 ♀, Rio Tapajoz, various localities

1 ♀, Benevides (Carnegie Mus.)

1 ♂, Santarem (do.)

In default of topotypical Peruvian material, we can only follow Hellmayr in referring our series here, on the ground that the outer webs of the primaries are extensively rufous. Brazilian birds should prove separable, as they are apparently smaller than the two Peruvian birds Hellmayr measured.

411. *SCAPANUS MELANOLEUCOS MELANOLEUCOS* (Gmelin)

Type locality: Surinam

Pará (Natterer); Mexiana Island (Hagmann); Marajo Island and north bank of Amazon (Snethlage); Santarem (Chapman and Riker); Caviana Island (Brodkorb)

2 ♀, north bank of Amazon near Obidos

2 ♂, Rio Tapajoz, Santarem and Pinhy

1 ♂, Santarem (Carnegie Mus.)

1 ♂, Rio Tapajoz, Villa Braga (do.)

412. *CEOPHLOEUS LINEATUS LINEATUS* (Linnaeus)

Type locality: Cayenne

Recorded by all collectors throughout the area

1 ♀, Pará, Val-de-Caes

1 ♂ 3 ♀, Rio Tapajoz, east bank

1 ♂, Obidos (Carnegie Mus.)

413. *PICUMNUS CIRRHATUS MACCONNELLI* Sharpe

Type locality: British Guiana

Marajo Island (Hellmayr); Santarem (Chapman and Riker); Arumanduba, Monte Alegre, Rio Tocantins (Snethlage)

3 ♂ 5 ♀, north bank of Amazon River near Obidos.

1 ♂, Rio Tapajoz, Santarem

1 ♀, Obidos (Carnegie Mus.)

13 ♂ 16 ♀, Santarem (do.)

These birds are very different from true *cirrhatus*, of which we have an excellent series, in just the respects Hellmayr says characterize *macconnelli*, which he records from Pará (cf. Novit. Zool., 1913, p. 349). *P. amazonicus* Snethlage 1906 (*nec buffoni amazonicus* Snethlage, 1914) is a synonym.

414. *PICUMNUS VARZÆ* Snethlage

Type locality: Obidos

Obidos and Rio Jamunda, Faro (Snethlage)

24 ♂ 27 ♀, Obidos (Carnegie Mus.)

A very distinct species, put next to *cirrhatus* by Madame Snethlage. It has nothing to do with this species, but the key and description in the Cat. Aves Amazonicas are so poor that no one would imagine how distinct it is.

415. *PICUMNUS GUTTIFER PALLIDUS* Snethlage

Type locality: Quatipuru, northeast of Pará

Only known from the type locality and obviously connecting *guttifer* and *spilogaster*.

416. *PICUMNUS EXILIS BUFFONI* Lafresnaye

Picumnus buffoni meridionalis Domaniewski: New name for *P. b. amazonicus* Snethlage, 1914, preoccupied by *P. amazonicus* Snethlage, 1906. (cf. Ann. Zoöl. Mus. Polon., 4, 1925, p. 296).

Rio Jary and Obidos (Snethlage)

2 ♂ 2 ♀, Obidos (Carnegie Mus.)

Inseparable from true *buffoni* of Cayenne, of which we have seen a great series of topotypes.

417. *PICUMNUS AURIFRONS TRANSFASCIATUS* Hellmayr & Gyldenstolpe

Type locality: Marai, east bank of Rio Tapajoz. (cf. Arkiv Zoöl., 29 B, no. 6, Jan. 1937, p. 1)

Rio Curuá and Rio Tacantins (Snethlage)

16 ♂ 9 ♀, Rio Tapajoz; various localities east bank.

1 ♂, Santarem (Carnegie Mus.)

3 ♂ 1 ♀, Rio Tapajoz. (do.)

In this recent paper, typical *aurifrons* is restricted to the Rio Madeira.

418. *PICUMNUS BORBAE* Pelzeln

Type locality: Borba, Rio Madeira, Brazil

Santarem (Hellmayr); Rio Jamauchim, Rio Tapajoz, Boim, Pinhel, Villa Braga (Snethlage)

7 ♂ 2 ♀, Rio Tapajoz, Villa Braga (Carnegie Mus.)

3 ♂, (do.), Itaituba (do.)

2 ♂ 2 ♀, (do.), Apaçy (do.)

This species is only known from the localities cited above, and its range is consequently included in that of *aurifrons*. It differs from that species only in that the crown feathers of the male are tipped with red instead of yellow.

In the Carnegie Museum series, all male *aurifrons* have faintly barred backs, and all male *borbae* have uniform olive backs. We consequently refer females with barred backs to *aurifrons*, and those with

immaculate backs to *borbae*. We are reinforced in this theory by the fact that two obviously immature birds, one of which is unquestionably *borbae*, because the red crown, spots are coming in, have the backs uniform.

Family DENDROCOLAPTIDAE

419. DENDROCOLAPTES CERTHIA CERTHIA (Boddaert)

Type locality: Cayenne

Rio Jary, Obidos (Snethlage); Rio Jamundá (Snethlage and Zimmer)

7 ♂ 4 ♀, Obidos (Carnegie Museum)

420. DENDROCOLAPTES CERTHIA CONCOLOR Pelzeln

Type locality: Villa Bella de Matto Grosso; Borba, Rio Madeira (Hellmayr, by subsequent designation)

Various localities, west bank of Rio Tapajoz (Snethlage, Zimmer).

1 ♂ 1 ♀, Rio Tapajoz, east bank (approaching *medius*)

5 ♂ 3 ♀, Rio Tapajoz, west bank (Carnegie Mus.)

421. DENDROCOLAPTES CERTHIA MEDIUS Todd

Type locality: Benevides, Pará

Pará (Wallace, Stone); Igarape-Assu, S. Antonio do Prata, Peixe-Boi (Hellmayr); Magoary (Steere); Providencia, Apehú, Rio Guamá (Snethlage)

1 ♂, Rio Acará, Acará

1 ♂ 1 ♀, Benevides (Carnegie Mus.)

6 ♂ 6 ♀, Santarem (do.)

1 ♂, Rio Tapajoz, right bank (do.)

This species is well known from every part of the south bank of the Amazon in our area. Zimmer has written at length of the remarkably inconsistent manner in which intergradation takes place; (cf. Amer. Mus. Novit., no 753, p. 2). Birds from the east bank of the Tapajoz to the Rio Tocantins are three different types. Some as far east as the Tocantins are *concolor*; a very few birds from the Tocantins are *medius*; all others are variously intermediate.

The series in the Carnegie Museum supports Zimmer's comments on the variability of this species. On the other hand, it does not support Hellmayr's reduction to synonymy of his own *ridgwayi* from Santarem. Birds from Pará to the Rio Acará are homogeneous, and are less different from true *certhia* than is the Santarem series from

medius. *Concolor* differs from a Santarem series in averaging browner and more uniform below. Three Santarem birds are the *concolor* type, but all the others are easily separable from *concolor*, and strikingly distinct from the Pará *medius*. On the basis of our material, therefore, *ridgwayi* should be recognized.

There are, of course, numerous other races of this variable species, which has a wide distribution northward and westward.

422. DENDROCOLAPTES HOFFMANSI Hellmayr

Type locality: Calamá, Rio Madeira

Villa Braga, left bank of Rio Tapajoz (Snethlage), recorded in error as "*concolor ridgwayi*"

3 ♂ 2 ♀, Rio Tapajoz, Villa Braga and Apay (Carnegie Mus.)

Only known from the localities listed above.

423. DENDROCOLAPTES TRANSFASCIATUS Todd

Type locality: Miritituba, Rio Tapajoz

2 ♂, Santarem

2 ♂, Santarem (Carnegie Museum)

1 ♂, Miritituba (do.)

Apparently a very rare bird, known from the three original specimens, the two here listed, and one from Santarem in the Museu Paulista (Pinto).

These two species presumably represent the *picumnus* group on the south bank of the Lower Amazon. We have here a fine illustration of the disadvantages of the trinomial system. On the "Formenkreis" theory, these two birds could be reduced to subspecies of *picumnus*. The facts are however, that geographically, they are isolated from any other race of that species, nor are intermediate specimens known. Treated as races, they are obviously not homologous with the subspecific variation just discussed in the species *certhia*. Treated as species, they are not homologous with the specific characters of *certhia* as contrasted with *picumnus* or *platyrostris*. The limits of our nomenclature cannot bring out the exact facts.

424. DENDROCOLAPTES PICUMNUS PICUMNUS Lichtenstein

Type locality: Cayenne

Obidos, Rio Jamundá (Snethlage and Zimmer)

16 ♂ 7 ♀, Obidos (Carnegie Mus.)

425. *DENDREXETASTES RUGIFUGA RUGIFUGA* (Lesson)

Type locality: Cayenne

Obidos (Hellmayr)

1 ♂, Obidos (Carnegie Mus.)

426. *DENDREXETASTES RUGIFUGA PARAENSIS* Lorenz

Type locality: Marco de Lagoa, Pará

An exceedingly rare genus and species. The type of the present race is still unique. On the right bank of the Rio Madeira, we find *moniliger* Zimmer. The bird will almost certainly be found in the intermediate area.

427. *HYLEXETASTES PERROTHI PERROTHI* (Lafresnaye)

Type locality: Cayenne

Obidos and Rio Jamundá (Snethlage, Zimmer, Pinto)

5 ♂ 6 ♀, Obidos (Carnegie Museum)

428. *HYLEXETASTES PERROTHI UNIFORMIS* Hellmayr

Type locality: Calamá, Rio Madeira

Rio Tapajoz: right bank, Caxiricatuba; left bank, Igarape-Brabo, Igarape Amorin; Rio Jamauchim (all Zimmer)

1 ♂, Rio Tapajoz, Caxiricatuba

2 ♂ 2 ♀, Santarem (Carnegie Mus.)

2 ♂ 2 ♀, Rio Tapajoz, Villa Braga (do.)

429. *XIPHOCOLAPTES ORENOCENSIS BERLEPSCHI* Snethlage

Type locality: Cachoeira, Rio Purus

Rio Tapajoz, Apaçy; Colonia de Mojuy, Santarem (Hellmayr, in Carnegie Museum)

2 ♂, Santarem (Carnegie Mus.)

1 ♀, Rio Tapajoz, Apaçy (do.)

Hellmayr and Zimmer differ as to whether *orenocensis* is specifically distinct from *promeropirhynchus* or not.

The two birds from Santarem appear to be a distinct subspecies from true *berlepschi*, of which we have 3 from the Rio Purus, and 2 from Tonantins, Rio Solimões. We note, however, that one of the latter is inseparable from the Santarem birds, so that better series are obviously needed. A specimen from Manacapuru, north bank of the Solimões, is apparently *ignotus* Ridgway.

430. *DENDROPLEX PICUS PICUS* (Gmelin)

Type locality: Cayenne

Recorded abundantly by all authors from every part of our area, including Marajo Island.

1 ♂ 1 ♀, north bank of Amazon near Obidos

11 ♂ 11 ♀, Rio Tapajoz; various localities

1 ♂, Obidos (Carnegie Mus.)

10 ♂ 2 ♀, Santarem (do.)

3 ♂ 1 ♀, Rio Tapajoz, left bank (do.)

The three birds from near Obidos are more rufescent below than the Rio Tapajoz and a great series from Cayenne and Surinam. They thus agree with Hellmayr's comment on birds from the Rio Branco in approaching *kienerii*. Those from Villa Braga have the larger size of *kienerii*, but are not more rufescent.

431. *DENDROPLEX NECOPINUS* Zimmer

Type locality: Muirapinina, Rio Negro

Rio Jamundá, Faro and Villa Bella Imperatriz (Zimmer)

We have nothing but admiration for the keenness displayed by Mr. Zimmer in picking out the anomalous birds described as *necopinus* from his fine series of *picus*. We have 30 specimens before us, representing *kienerii* from both banks of the Rio Solimoës (Manacapuru, Caviana, Sao Paulo de Olivença, islands in the river near Manacapuru), and the Rio Purus (Arima, Nova Olinda, Hyutanahan). Two birds from the islands in the Solimoes stand out from this series, and display *every one* of the characters of color and proportionate size ascribed to *necopinus*. Moreover, one is obviously adult and one is immature, thus endorsing Mr. Zimmer's contention that the characters of *necopinus* cannot be ascribed to some stage of immaturity of *picus*. They come, however, from so near the type locality of *kienerii*, that the application of the name becomes, perhaps, doubtful. A third specimen from the same locality is apparently an intermediate. The bill and color characters are those of *kienerii*, but it has the proportionately long tail of *necopinus*. A male adult from Villa Braga has the ovate streaking of *necopinus* rather than the squamate effect of *picus*; it is olivaceous on the mantle rather than the rufescence of *picus*. It has the proportionately shorter tail of *picus*. The bill is that of *picus*. In the longer wing-tip, and brown rather than rufous wing-

coverts, it resembles *necopinus*. It will be apparent, therefore, that the shorter, slender bill of *necopinus* is its best character.

We heartily agree with Mr. Zimmer in "seriously questioning" the distinctness of the genus *Dendroplex*.

432. *XIPHORHYNCHUS GUTTATUS GUTTATOIDES* (Lafresnaye)

Type locality: Rio Marañon, Peru
Villa Bella Imperatriz (Zimmer)

433. *XIPHORHYNCHUS GUTTATUS EYTONI* (Sclater)

Type locality: Rio Capim, Pará
Innumerable records throughout the balance of our area from Marajo Island (Snethlage) west to the Rio Madeira.

- 2 ♀, Rio Acará, Acará
- 10 ♂ 5 ♀, Rio Tapajoz; various localities right bank.
- 7 ♂ 3 ♀, Benevides (Carnegie Mus.)
- 14 ♂ 5 ♀, Santarem (do.)
- 3 ♂ , Rio Tapajoz, both banks (do.)

We are by no means convinced that there is not another recognizable subspecies along the south bank of the Amazon. Our Tapajoz series differs strikingly from the Acará birds in being more richly ochraceous below, and in having the feathers of the back with much broader, light centers, giving a less streaked, more guttate effect. While we defer to Zimmer's critique of the remarkably variable nature of this series, we note that he lists no topotypes of *eytoni* in his enormous series, and Hellmayr, who had a good series of *eytoni*, lists only two specimens outside the Pará region.

434. *XIPHORHYNCHUS GUTTATUS POLYSTICTUS* (Salvin and Godman)

Type locality: Bartica Grove, British Guiana
Obidos (Hellmayr); Faro (Zimmer and Snethlage); Pataua (Pinto)
7 ♂ 3 ♀, Obidos (Carnegie Mus.)

Zimmer has shown (Amer. Mus. Nov., no. 756, 1934) that this little known "species" is merely an earlier name for the well known *sororius* (Berlepsch and Hartert). It is interesting to see how the various races meet and intergrade along the extreme western limits of our area.

435. *XIPHIORHYNCHUS OCELLATUS OCELLATUS* (Spix)

Type locality: corrected to Rio Madeira

Left bank of the Rio Tapajoz (Snethlage); Villa Bella Imperatriz, Faro, Rio Xingú and Rio Tocantins (Zimmer)

12 ♂ 5 ♀, Rio Tapajoz, Apagy and Villa Braga (Carnegie Mus.)

436. *XIPHORHYNCHUS PARDALOTUS* (Vieillot)

Type locality: Cayenne

Rio Jary, Obidos, Rio Jamundá (Snethlage); also right bank of Rio Tapajoz (Zimmer)

9 ♂ 3 ♀, Obidos (Carnegie Mus.)

This species occurs with *ocellatus* on the north bank of the Amazon, and occurs on the south bank only where *ocellatus* is apparently lacking.

437. *XIPHORHYNCHUS SPIXII SPIXII* (Lesson)

Type locality: Pará

Abundant from Pará to the right bank of the Tapajoz

2 ♂ 2 ♀, Pará, Bosque

4 ♂ 4 ♀, Rio Tapajoz, right bank

8 ♂ 4 ♀, Benevides (Carnegie Mus.)

5 ♂ 3 ♀, Santarem (do.)

9 ♂ 3 ♀, Rio Tapajoz, right bank (do.)

This great series shows that *fraterculus* Ridgway is untenable.

438. *XIPHORHYNCHUS SPIXII ELEGANS* (Pelzeln)

Type locality: Engenho do Gama, Matto Grosso

Rio Tapajoz, left bank, Villa Braga (Snethlage) and Itaituba (Hellmayr).

7 ♂ 4 ♀, Rio Tapajoz, left bank (Carnegie Mus.)

A bird of very limited distribution; otherwise known only along the Rio Madeira.

439. *XIPHORHYNCHUS OBSOLETUS OBSOLETUS* (Lichtenstein)

Type locality: "province of Pará"

Record from the north bank (Snethlage), and the south bank from the Rio Tocantins westward (Chapman and Riker, Snethlage, Zimmer)

1 ♂, Obidos

3 ♂ 1 ♀, Pará, Val-de-Caes

5 ♂ 3 ♀, Rio Tapajoz; various localities.

1 ♂ 1 ♀, Obidos (Carnegie Mus.)

11 ♂ 3 ♀, Santarem (do.)

4 ♂ 2 ♀, Rio Tapajoz, both banks (do.)

Apparently never definitely reported previously near Pará. Our specimens agree with three from Obidos in being a warmer, more rufescent brown than the Tapajoz series. Zimmer has shown that certain specimens from the north bank approach *notatus* (Eyton).

440. *LEPIDOCOLAPTES ALBOLINEATUS ALBOLINEATUS* (Lafresnaye)

Type locality: Cayenne

Rio Jary, Obidos, Rio Jamundá (Snethlage)

9 ♂ 4 ♀, Obidos (Carnegie Mus.)

This is the bird better known as *puncticeps* (Sclater and Salvin).

441. *LEPIDOCOLAPTES ALBOLINEATUS LAYARDI* (Sclater)

Type locality: Pará

Pará (Layard, Snethlage, Stone, Zimmer); Peixe-Boi (Hellmayr); Rio Guamá (Snethlage); Rio Tocantins (Snethlage, Zimmer); Santarem (Chapman and Riker), Rio Tapajoz, right bank, (Zimmer)

1 ♂, Rio Tapajoz, Caxiricatuba

2 ♂ 3 ♀, Benevides (Carnegie Mus.)

1 ♂, Santarem (do.)

1 ♂, Rio Tapajoz, Miritituba (do.)

442. *LEPIDOCOLAPTES ALBOLINEATUS MADEIRAE* (Chapman)

Type locality: Porto Velho, Rio Maderia

Rio Tapajoz, left bank (Snethlage, Hellmayr, Zimmer)

1 ♂, Rio Tapajoz, Villa Braga (Carnegie Mus.)

Hellmayr and Zimmer disagree on the line of demarcation between these two races, the former referring specimens from the right bank of the Tapajoz to *madeirae*. Hellmayr also regards both these birds as races of *fuscicapillus*, which he regards as specifically distinct.

443. *LEPIDOCOLAPTES ANGUSTIROSTRIS CORONATUS* (Lesson)

Type locality: Piauhy

Marajo Island (Hellmayr); Monte Alegre (Snethlage); Santarem (Allen; Pinto)

1 ♂ 2 ♀, Santarem

1 ♂ 1 ♀, Santarem (Carnegie Mus.)

This species is more southern, and is primarily characteristic of campo country. There is only one female on record from the north bank of the Amazon. A series should be carefully compared.

444. *CAMPYLORHAMPHUS TROCHILIROSTRIS* SNETHLAGEÆ

Zimmer, 1934

Type locality: Serra de Parintins, Villa Bella Imperatriz. Also recorded from mouth of Rio Andira and Rio Jamundá, Faro (Zimmer); Faro and Monte Alegre (Snethlage)

445. *CAMPYLORHAMPHUS PROCURVOIDES PROCURVOIDES* (Lefresnaye)

Type locality: Cayenne

Rio Jary, Rio Jamundá (Snethlage); Faro (Zimmer)

1 ♂, Obidos (Carnegie Mus.).

446. *CAMPYLORHAMPHUS PROCURVOIDES PROBATUS* Zimmer, 1934

Type locality: Igarapé Auara, Rio Madeira

Villa Bella Imperatriz, left bank of Rio Tapajoz (Zimmer) and also Snethlage for the latter locality

4 ♂ 3 ♀, Rio Tapajoz, Itaituba, Villa Braga, Apaçy (Carnegie Mus.)

447. *CAMPYLORHAMPHUS PROCURVOIDES MULTOSTRIATUS*

(Snethlage)

Type locality: Arumatheua, Rio Tocantins

Also east bank of Rio Tapajoz and the Rio Xingú (Zimmer); Aveiro (Pinto)

2 ♂ 2 ♀, Rio Tapajoz, Caxiricatuba (August, 1932) and Pinhy (May and June, 1933)

7 ♂ 2 ♀, Santarem (Carnegie Mus.)

2 ♂ 2 ♀, Rio Tapajoz, Miritituba (do.)

Zimmer's careful monograph of this group (Amer. Mus. Novit., no. 728, 1934) has been followed here. Its most important departure from Hellmayr's treatment is the discovery of the race *probatas*, connecting the little known *multostriatus* Snethlage with the *procurvoides* group.

448. *NASICA LONGIROSTRIS LONGIROSTRIS* (Vieillot)

Type locality: Obidos, by subsequent designation

Obidos (Hellmayr); Maracá, Monte Alegre, Rio Maecuru, Rio Jamundá (Snethlage); Marajo Island (Brodkorb)

2 ♂ 5 ♀, Boca do Igarapé-Piaba, near Obidos

1 ♀, Obidos (Carnegie Mus.)

449. *NASICA LONGIROSTRIS AUSTRALIS* Griscom and Greenway, 1937

Type locality: Santarem, Brazil

Santarem (Chapman and Riker, Hellmayr); Rio Tocantins and Rio Tapajoz (Snethlage); Pataua and Santarem (Pinto)

3 ♂ 2 ♀, 1 imm. ?, Rio Tapajoz, Santarem and Caxiricatuba.

1 ♀, Rio Tapajoz, Apaçy, (Carnegie Mus.)

5 ♂ 5 ♀, Santarem (do.)

The last word has yet to be written on subspecific variation in this Woodhewer. Our description of *australis* was based on the assumption that birds from the south bank of the Amazon were separable from those of the north bank, and the material later examined in the Carnegie Museum confirmed it. Mr. Zimmer, however, assures us that a larger series in the American Museum does not bear out the characters alleged.

However this may be, there are unquestionably two subspecies. Nearly a century ago Lesson described *albicollis* from French Guiana, but even Hellmayr never saw a specimen from that country. Five specimens from French Guiana in the Carnegie Museum are subspecifically distinct from *australis* at a mere glance. It now turns out most unfortunate that we should have restricted typical *longirostris* to Obidos on the north bank of the Amazon. The facts are that this population is intermediate as usual. We do not for a moment favor the recognition of three subspecies. The material in Cambridge, New York, and Pittsburgh should be combined to determine whether *australis* is a synonym of *longirostris*, or whether *albicollis* is a synonym of *longirostris*. Nine times out of ten in birds having a similar range, the best "break" is the Amazon River.

450. *GLYPHORHYNCHUS SPIRURUS SPIRURUS* (Veillot)

Type locality: Cayenne

Amapá and Rio Jamundá, Faro (Snethlage); Faro (Zimmer); Obidos (Hellmayr)

3 ♂, Obidos (Carnegie Mus.)

451. *GLYPHORHYNCHUS SPIRURUS INORNATUS* Zimmer, 1934

Type locality: Villa Bella Imperatriz

Left bank of Rio Tapajoz (Zimmer)

2 ♂ 1 ♀, Rio Tapajoz, Villa Braga (Carnegie Mus.)

This recently described form ranges west to the Rio Madeira.

452. *GLYPHORHYNCHUS SPIRURUS CUNEATUS* (Lichtenstein)

Type locality: Bahia, Brazil

Abundantly recorded around Pará (all collectors); Rio Tocantins, Rio Xingú and Rio Tapajoz, east bank (Snethlage and Zimmer)

- 7 ♂ 6 ♀ 1 ? , vicinity of Pará
- 2 ♂ 1 ♀ , Rio Acará, Acará
- 1 ♀ , Rio Tapajoz, Pataua
- 5 ♂ 2 ♀ , Benevides (Carnegie Mus.)
- 6 ♂ 1 ♀ , Santarem (do.)
- 2 ♂ 1 ♀ , Rio Tapajoz, right bank (do.)

453. *SITTASOMUS GRISEICAPILLUS AMAZONUS* Lafresnaye

Type locality: Peruvian Amazons

Left bank of Rio Tapajoz (Snethlage and Zimmer); Villa Bella Imperatriz and Rio Xingú (Zimmer); Rio Tocantins (Snethlage)?

- 11 ♂ 4 ♀ , Rio Tapajoz, left bank (Carnegie Mus.)

454. *SITTASOMUS GRISEICAPILLUS AXILLARIS* Zimmer, 1934

Type locality: near Faro, Rio Jamundá, Brazil

Also right bank of Rio Tapajoz (Zimmer)

- 3 ♂ 1 ♀ , Rio Tapajoz, Pinhy and Caxiricatuba
- 6 ♂ 1 ♀ , Santarem (Carnegie Mus.)
- 2 ♂ , Rio Tapajoz, Miritituba (do.)
- 2 ♂ 2 ♀ , Obidos (do.)

The species is recorded from Obidos by Hellmayr. In view of the curious distribution of the races we cannot be absolutely certain that this record belongs here. We cannot distinguish them locally.

455. *DECONYCHURA LONGICAUDA LONGICAUDA* (Pelzeln)

Type locality: Manaos, Brazil

Rio Jamundá, Faro (Zimmer); Obidos (Carnegie Mus.)

- 2 ♂ 1 ♀ , Obidos (Carnegie Mus.)

456. *DECONYCHURA LONGICAUDA PALLIDA* Zimmer, 1934

Type locality: Rio Purus, Brazil

Villa Bella Imperatriz, Rio Tapajoz, left bank; Rio Iriri and Rio Xingú (Zimmer); Rio Iriri (Snethlage); Peixe-Boi (Hellmayr); Providencia (Snethlage); Benevides (Zimmer)

- 1 ♂ , Rio Tapajoz, Pataua
- 2 ♂ , Benevides (Carnegie Mus.)
- 1 ♂ , Rio Tapajoz, Miritituba (do.)
- 2 ♂ , (do.), Villa Braga (do.)

457. *DECONYCHURA STICTOLAEMA STICTOLAEMA* (Pelzeln)

Type locality: Borba, Rio Madeira

Villa Bella Imperatriz and Rio Tocantins (Zimmer)

1 ♀, Rio Tapajoz, Pataua

1 ♂, Santarem (Carnegie Mus.)

1 ♂, Rio Tapajoz, Villa Braga (do.)

1 ♂, Rio Tapajoz, Miritituba (do.)

458. *DECONYCHURA STICTOLAEMA CLARIOR* Zimmer, 1929

Type locality: Pied Saut, Oyapok, French Guiana

Rio Jamundá, Faro (Zimmer); Igarapé Anibá (Pinto)

1 ♂ 1 ♀, Obidos (Carnegie Mus.)

459. *DENDROCINCLA MERULA MERULA* (Lichtenstein)

Type locality: Cayenne

Rio Jamundá, Faro (Zimmer)

1 ♂ 1 ♀, Obidos (Carnegie Mus.)

460. *DENDROCINCLA MERULA BADIA* Zimmer, 1934

Type locality: Pedral, Rio Tocantins

Igarapé-Assu, Peixe-Boi (Hellmayr); Rio Guamá (Snethlage); Rio Tocantins, right bank (Zimmer)

2 ♀, Rio Acará, Acará

461. *DENDROCINCLA MERULA CASTANOPTERA* Ridgway

Type locality: Diamantina, Pará, Brazil

Santarem (Chapman and Riker); Rio Tapajoz, right bank (Zimmer)

8 ♂ 5 ♀, Rio Tapajoz, various localities, right bank

7 ♂ 3 ♀, Santarem (Carnegie Mus.)

5 ♂ 2 ♀, Rio Tapajoz, Miritituba (do.)

This race presumably ranges eastward to the left bank of the Rio Tocantins.

462. *DENDROCINCLA MERULA OLIVASCENS* Zimmer, 1934

Type locality: Villa Bella Imperatriz, Amazon River left bank of the Rio Tapajoz (Snethlage and Zimmer)

1 ♂ 4 ♀, Rio Tapajoz, left bank (Carnegie Mus.)

463. *DENDROCINCLA FULIGINOSA FULIGINOSA* (Vieillot)

Type locality: Cayenne

Obidos and Rio Jamundá (Snethlage); Faro (Zimmer)

9 ♂ 3 ♀, Obidos (Carnegie Mus.)

464. *DENDROCINCLA FULIGINOSA RUFO-OLIVACEA* Ridgway

Type locality: Diamantina, Rio Tapajoz

Vicinity of Pará (numerous collectors); Castanhal (Stone); Rio Acará (Hellmayr); Rio Tocantins (Snethlage and Zimmer); Rio Xingú (Zimmer), Rio Tapajoz, right bank (Zimmer)

2 ♂ 3 ♀, Benevides (Carnegie Mus.)

2 ♂, Santarem (do.)

3 ♂ 4 ♀, Rio Tapajoz, Miritituba (do.)

465. *DENDROCINCLA FULIGINOSA ATRIROSTRIS*

(Lafresnaye and D'Orbigny)

Type locality: Guarayos, Bolivia

Left bank of Rio Tapajoz, (Snethlage, Zimmer); Villa Bella Imperatriz (Zimmer)

4 ♂ 2 ♀, Rio Tapajoz, left bank (Carnegie Mus.)

It will be noted that Zimmer's arrangement of the species and races of this genus is radically different from that of Hellmayr. We follow it here, as the material at his command was incomparably superior.

Family FURNARIIDAE

466. *FURNARIUS MINOR* Pelzeln

Type locality: Rio Madeira

Santarem (Chapman and Riker, Hellmayr); Monte Alegre, Rio Maccuru, Rio Jamundá (Snethlage)

4 ♂ 9 ♀, north bank of Amazon, near Obidos

1 ♂, Obidos (Carnegie Mus.)

2 ♂ 1 ♀, Rio Tapajoz

11 ♂ 12 ♀, Santarem (Carnegie Mus.)

1 ♂ 1 ♀, Rio Tapajoz, right bank (do.)

Two birds from upper Amazonian Ecuador are apparently much buffier below than lower Amazonian series of comparable plumage. This is especially marked on the belly, which is not so extensively white in sharp contrast with the chest.

467. *FURNARIUS FIGULUS PILEATUS* Sclater and Salvin

Type locality: Santarem, Brazil

Santarem (Chapman and Riker); Rio Iriri, Arumanduba, Monte Alegre, Rio Maecuru, Rio Jamundá (Snethlage)

6 ♂ 4 ♀, north bank of the Amazon near Obidos

1 ♀, Obidos (Carnegie Mus.)

1 ♂, Rio Tapajoz, Santarem

7 ♂ 5 ♀, Santarem (Carnegie Mus.)

These two species of *Furnarius* are characteristic of the Amazon River, while *leucopus* has representative races both north and south of the Amazon, but not in the valley itself.

468. *SYNALLAXIS ALBESCENS* subspecies?

Mexiana Island (Hagman); Marajo Island, Arumanduba (Snethlage)

Series from Mexiana and Marajo Islands have yet to be properly compared. Hellmayr's reference of the Mexiana bird to *albigularis* was based on the examination of one immature female. At that time *albigularis* was supposed to range from the Rio Napo, Ecuador throughout the Amazon Valley. The species is primarily found in open "campo" or semi-arid scrub country, and is probably nearly as local in our area, as the few records would indicate. The population considered will probably prove to be one more of the already numerous local subspecies.

469. *SYNALLAXIS ALBESCENS INAEQUALIS* Zimmer, 1935.

Type locality: Villa Bella Imperatriz

1 ♂ 1 ♀, Lago Grande, south bank of the Amazon

1 ♂, Santarem (Carnegie Mus.)

These specimens are provisionally referred to this recently described form, which ranges between the Madeira and Tapajoz rivers, "crossing to the north bank in the same general region."

470. *SYNALLAXIS GUJANENSIS GUJANENSIS* (Gmelin)

Type locality: Cayenne

Recorded abundantly throughout our area from Marajo Island (Brodkorb) to the left bank of the Rio Tapajoz

- 1 ♂, near Obidos
- 2 ♂ 3 ♀, Pará, Val-de-Caes
- 10 ♂ 9 ♀, Rio Tapajoz, right bank
- 2 ♂ 1 ♀, Obidos (Carnegie Mus.)
- 4 ♂ 1 ♀, Benevides (do.)
- 3 ♂ 4 ♀, Santarem (do.)
- 1 ♂ 1 ♀, Rio Tapajoz, right bank (do.)
- 3 ♂ 3 ♀, (do.) , left bank (do.)

The typical subspecies ranges south along the coast to Maranhao, and is replaced by *inornata* Pelzeln from the Rio Madeira westward. A certain percentage of birds from the Rio Tapajoz area are minutely hoarier than Pará birds, but there is no necessity for a third subspecies.

471. *SYNALLAXIS PROPINQUA* Pelzeln

Type locality: Rio Madeira, below mouth of Rio Marcy
Rio Tocantins, Baião (Zimmer)

An interesting range extension of this very distinct upper Amazonian species, which is as yet unknown between the type locality and the Rio Tocantins.

472. *SYNALLAXIS RUTILANS RUTILANS* Temminck

Type locality: Cametá, Rio Tocantins

Rio Tocantins, left bank, Rio Xingú, Rio Iriri, Rio Jamauchim, Rio Tapajoz, right bank (Snethlage); Santarem (Chapman and Riker, Hellmayr); numerous localities in same range (Zimmer)

- 15 ♂ 11 ♀, 1 ?, Rio Tapajoz, right bank
- 15 ♂ 4 ♀, Santarem (Carnegie Mus.)
- 1 ♂ 2 ♀, Rio Tapajoz, right bank (do.)

473. *SYNALLAXIS RUTILANS DISSORS* Zimmer, 1935

Type locality: Manaus, Brazil

Obidos (Snethlage and Zimmer); Faro (Zimmer)

- 1 ♂ 3 ♀, Obidos (Carnegie Mus.)

474. *SYNALLAXIS RUTILANS AMAZONICA* Hellmayr

Type locality: Itaituba, left bank of Rio Tapajoz

Rio Tapajoz, left bank, Boim and Villa Braga (Hellmayr); Villa Bella Imperatriz (Zimmer)

1 ♀ 1 ?, Rio Tapajoz, Pinhel

28 ♂ 15 ♀, (do.), left bank (Carnegie Mus.)

475. *SYNALLAXIS RUTILANS OMISSA* Hartert

Type locality: Pará

Recorded abundantly by all collectors from the vicinity of Pará to the right bank of the Tocantins

2 ♂ 5 ♀, 2 ?, Pará, Val-de-Caes

8 ♂ 4 ♀, Benevides (Carnegie Mus.)

This series raises a very interesting problem. Hartert originally described *omissa* as a distinct species, based on males of the cinereous type, the chestnut reduced to the wings only. Later collections near Pará reported on by Hellmayr yielded females of the chestnut type, which were barely separable from true *rutilans* in minor differences of color, shade and tone. Additional males of the cinereous type proved to have a variable number of feathers on breast and back. Dr. Hellmayr was obviously correct in reducing *omissa* to a race of *rutilans*.

The series before us slightly alters the interpretation of the facts, as it becomes apparent that the sex difference breaks down. We have a pair of adults in the chestnut phase, and the balance of the series consists of cinereous birds of both sexes. A study of this series shows exactly the sexual and age variations to be expected in *Synallaxis*. Some are obviously immature birds in the freckling below, in the shorter, less pointed and less stiff tail feathers. It is also these birds that have the maximum amount of chestnut feathers on the abdomen. It will be apparent, therefore, that some birds are always chestnut and other birds are hatched cinereous. We are dealing, therefore, not with sexual dimorphism, but a color phase.

476. *CERTHIAxis CINNAMOMEA CINNAMOMEA* (Gmelin)

Type locality: Cayenne

Arumanduba, Eréré, (Snethlage); Mexiana Island (Wallace; Hagman); Marajo Island (Müller); Rio Tocantins, Baião (Zimmer), and probably Snethlage also; Caviana Island (Brodkorb)

477. *CERTHIAxis CINNAMOMEA PALLIDA* Zimmer, 1935

Type locality: Igarapé

Cacao Pereira, Rio Negro, Rio Jamundá (Snethlage and Zimmer); Rio Tapajoz (Zimmer); Santarem (Chapman and Riker)

4 ♂, Rio Tapajoz, Pinhel (west bank)

2 ♂, Obidos

2 ♂ 1 ♀, (do.) (Carnegie Mus.)

3 ♂ 1 ♀, Santarem (do.)

478. *CERTHIAxis MUSTELINA* (Sclater)

Type locality: Rio Madeira, Brazil

Santarem (Chapman and Riker); Monte Alegre (Snethlage and Zimmer)

2 ♂ 1 ♀, north bank of Amazon near Obidos

3 ♂ 2 ♀, (do.) (Carnegie Mus.)

1 ♂, Santarem (do.)

479. *CRANIOLEUCA VULPINA VULPINA* (Pelzeln)

Type locality: Matto Grosso, Brazil

Rio Tocantins and Rio Tapajoz (Snethlage)

1 ♂ 1 ♀, Rio Tapajoz, Santarem

13 ♂ 5 ♀, Santarem (Carnegie Mus.)

1 ♀, Rio Tapajoz, Miritituba (do.)

480. *CRANIOLEUCA VULPINA ALOPECIAS* (Pelzeln)

Type locality: Rio Branco, Brazil

Monte Alegre, Rio Maecuru (Snethlage)

3 ♂ 3 ♀, near Obidos

1 ♂ 3 ♀, Obidos (Carnegie Mus.)

481. *CRANIOLEUCA MÜLLERI* (Hellmayr)

Type locality: Mexiana Island

Also Monte Alegre, Obidos, Rio Jamundá (Snethlage)

1 ♀, north bank near Obidos

3 ♀, Obidos (Carnegie Mus.)

4 ♂ 2 ♀, Santarem (do.)

482. *CRANIOLEUCA GUTTURATA* (Lafresnaye and D'Orbigny)

Type locality: Yuracares, Bolivia

Rio Tocantins, Rio Tapajoz (Snethlage)

3 ♂, Rio Tapajoz, Miritituba (Carnegie Mus.)

A comparatively little known bird, with a remarkably wide but scattered distribution.

483. *THRIPOPHAGA FUSCICEPS OBIDENSIS* Todd

Type locality: islands near Obidos, Brazil

2 ♂ 4 ♀, Obidos (Carnegie Mus.)

Known only from the type series of six specimens in the Carnegie Museum. The genus is so rare that other forms will undoubtedly be discovered in the intervening area. Typical *fusciceps* from Bolivia is reported from southeastern Peru and eastern Ecuador, but these specimens do not agree with the type, according to Hellmayr.

484. *BERLEPSCHIA RIKERI* (Ridgway)

Type locality: Diamantina, Santarem, Brazil

Pará (Snethlage); Santarem (Chapman and Riker, Pinto)

1 ♂, Pará, Val-de-Caes

1 ♀, Rio Acará, Acará

485. *HYLOCTISTES SUBULATUS SUBULATUS* (Spix)

Type locality: Rio Amazonas

3 ♂ 2 ♀, Rio Tapajoz, west bank, Ville Braga (Carnegie Mus.)

An extension of range eastward from the Rio Madeira.

486. *ANCISTROPS STRIGILATUS COGNITUS*

Griscom and Greenway, 1937

Type locality: Tauary, Rio Tapajoz

Santarem and Rio Tapajoz, both banks (Griscom and Greenway)

1 ♀, Rio Tapajoz, Tauary

2 ♂ 1 ♀, (do.), Miritituba (Carnegie Mus.)

2 ♂ 1 ♀, (do.), Villa Braga (do.)

1 ♂, Santarem (do.)

487. PHILYDOR PYRRHODES (Cabanis)

Type locality: coast of British Guiana

Pará (Snethlage); Rio Capim (Goeldi, Stone); Rio Tocantins, Obidos (Snethlage); Santarem (Hellmayr, Pinto); Utinga, Rio Tocantins, Rio Tapajoz (Zimmer)

2 ♂ 2 ♀, Rio Tapajoz, east bank

1 ♀, Rio Acará, Acará

1 ♂, Obidos (Carnegie Mus.)

2 ♂, Santarem (do.)

3 ♂, Rio Tapajoz, both banks (do.)

488. PHILYDOR ERYTHROPTERUS DILUVIALIS

Griscom and Greenway, 1937

Type locality: Caxiricatuba, right bank of Rio Tapajoz, Pará, Brazil.

Rio Tapajoz, both banks (Griscom and Greenway)

1 ♂, Rio Tapajoz, Caxiricatuba

3 ♂ (do.), Villa Braga (Carnegie Mus.)

As mentioned in the original description, this subspecies is very distinct from large series from upper Amazonia (east Ecuador, Rio Solimões, Rio Purus), but whether these last represent true *erythropterus*, based on "Bogota" collections, is problematical.

489. PHILYDOR RUFICAUDATUS (Lafresnaye and D'Orbigny)

Type locality: Yuracares, Bolivia

S. Antonio do Prata, Rio Guamá, Rio Tocantins, Rio Jary (Snethlage)

1 ?, Rio Tapajoz, Tauary

2 ♂ 1 ♀, Obidos (Carnegie Mus.)

2 ♂, Rio Tapajoz, Miritituba, and Villa Braga (do.)

This widely ranging species has proved to be very constant geographically. Snethlage's records should be critically examined in view of the confusion with the next species which has prevailed in the past. We are quite aware that Zimmer (Am. Mus. Novit., 785, March, 1935,) has published a valuable critique on the relations between *P. ruficaudatus* and *P. erythrocerus*, and that he lists no specimens of *P. ruficaudatus* from our area in Brazil. The specimens we record above are, therefore, a notable range extension, and its occurrence in a region where *P. erythrocerus* is abundant further endorses the concept

of *P. ruficaudatus* as a distinct species. The Carnegie Museum also possesses specimens from the Rio Purus, thus partly filling the great hiatus in this species' range.

490. PHILYDOR ERYTHROCERCUS ERYTHROCERCUS (Pelzeln)

Type locality: Manaus, Brazil

Obidos (Snethlage); Faro (Zimmer)

1 ♂ 1 ♀, Obidos (Carnegie Mus.)

491. PHILYDOR ERYTHROCERCUS LYRA Cherrie

Type locality: Rio Roosevelt, Matto Grosso

Pará (Wallace, Pará); Peixe-Boi, Igarapé-Assu, S. Antonio do Prata (Hellmayr); Santarem (Chapman and Riker); Sta. Isabel, Rio Guamá, Rio Moju, Rio Tocantins, Rio Xingü, Rio Curua, Rio Tapajoz, Rio Jamauchim (Snethlage); large series, Pará to Villa Bella Imperatriz (Zimmer)

5 ♂ 3 ♀, Pará, Val-de-Caes

15 ♂ 5 ♀ 1 ?, Rio Tapajoz, various localities, east bank.

32 ♂ 11 ♀, Benevides, Rio Tapajoz, Santarem (Carnegie Mus.)

492. AUTOMOLUS INFUSCATUS CERVICALIS (Sclater)

Type locality: Bartica Grove, British Guiana

Rio Jary (Snethlage); Obidos (Hellmayr); Faro (Zimmer)

2 ♂ 2 ♀, Obidos (Carnegie Mus.)

493. AUTOMOLUS INFUSCATUS PARAENSIS Hartert

Type locality: Benevides, near Pará

Near city of Pará and Rio Acará (numerous records, all collectors); Rio Tocantins, Rio Iriri, Rio Tapajoz, Rio Jamauchim (Snethlage); Rio Tapajoz to Pará (Zimmer)

1 ♂ 1 ♀, Pará, Bosque

9 ♂ 8 ♀ 1 ?, Rio Tapajoz, various localities east bank

5 ♂ 4 ♀, Benevides (Carnegie Mus.)

11 ♂ 5 ♀, Santarem (do.)

2 ♂ 3 ♀, Rio Tapajoz, both banks (do.)

494. AUTOMOLUS OCHROLAEMUS AURICULARIS Zimmer

Type locality: Caxiricatuba, Rio Tapajoz

Rio Tapajoz (Snethlage and Zimmer); Villa Bella Imperatriz (Zimmer)

3 ♂ 2 ♀, from the type locality.

2 ♂ 1 ♀, Santarem (Carnegie Mus.)

17 ♂ 4 ♀, Rio Tapajoz, both banks (do.)

495. *AUTOMOLUS OCHROLAEMUS TURDINUS* (Pelzeln)

Type locality: Manaus, Brazil

Obidos, Rio Jamundá (Faro) on the north bank (Snethlage and Zimmer)

2 ♂ 1 ♀, Obidos (Carnegie Mus.)

496. *AUTOMOLUS RUFIPILEATUS RUFIPILEATUS* (Pelzeln)

Type locality: Pará

Pará (Natterer); Rio Guamá (Stone); Rio Tocantins, Baião (Snethlage);

Rio Tapajoz (in Carnegie Museum, fide Hellmayr)

2 ♂ 1 ♀, Santarem (Carnegie Mus.)

1 ♂ 1 ♀, Rio Tapajoz, Miritituba (do.)

A rare and little known species, the typical race reported west to the Rio Purus.

497. *XENOPS MINUTUS GENIBARBIS* Illiger

Type locality: Cametá, Rio Tocantins

Pará (Stone); S. Antonio do Prata (Hellmayr); numerous localities near Pará

(Snethlage); Rio Tocantins, Rio Xingú, Rio Jamauchim, Rio Tapajoz

(Snethlage); Santarem (Hellmayr); numerous localities, Pará to Villa

Bella Imperatriz (Zimmer)

1 ♂, Pará, Bosque

1 ♂ 1 ♀, Rio Acará, Acará

12 ♂ 4 ♀, Rio Tapajoz, various localities, east bank

13 ♂ 8 ♀, Benevides, Santarem, Rio Tapajoz, both banks, (Carnegie Mus.)

498. *XENOPS MINUTUS RUFICAUDUS* (Vieillot)

Type locality: Cayenne

Obidos (Snethlage); Faro (Zimmer)

3 ♂ 1 ♀, Obidos (Carnegie Mus.)

499. *XENOPS TENUIROSTRIS TENUIROSTRIS* Pelzeln

Type locality: Rio Madeira

Rio Tapajoz, Apay, Itaituba (Hellmayr); left bank of Rio Tapajoz (Zimmer)

2 ♂ 1 ♀, Rio Tapajoz, Apay, Itaituba (Carnegie Mus.)

500. *XENOPS RUTILANS PURUSIANUS* Todd

Type locality: Hyutanahan, Rio Purus, Brazil

Left bank of Rio Tapajoz, Igarapé Amarin (Zimmer)

It is interesting to note that *minutus* is very definitely the dominant species in our area.

501. *SCLERURUS MEXICANUS MACCONNELLI* Chubb

Type locality: Ituribisci, British Guiana

Rio Capim (Wallace); Peixe-Boi (Hellmayr); Rio Tapajoz (Snethlage and Zimmer)

1 ♀, Pará, Bosque

3 ♂, Rio Tapajoz, east bank

3 ♂, Obidos (Carnegie Mus.)

1 ♂ 2 ♀, Santarem (do.)

3 ♂ 2 ♀, Rio Tapajoz, both banks (do.)

502. *SCLERURUS RUFIGULARIS RUFIGULARIS* Pelzeln

Type locality: Borba, Rio Madeira

Pará, Rio Guamá (Stone); S. Antonio do Prata (Hellmayr); various localities near Pará and Rio Tocantins (Snethlage)

1 ♂ 1 ♀, Pará, Bosque

2 ♂ 2 ♀, Benevides (Carnegie Mus.)

503. *SCLERURUS RUFIGULARIS FULVIGULARIS* Todd

Type locality: Tamanoir, French Guiana

Obidos (Snethlage)

3 ♀, Obidos (Carnegie Mus.)

504. *SCLERURUS CAUDACUTUS INSIGNIS* Zimmer, 1934

Type locality: Faro, Rio Jamundá, Brazil

Only known from the type locality.

505. *SCLERURUS CAUDACUTUS PALLIDUS* Zimmer, 1934

Type locality: Villa Bella Imperatriz

Igarapé-Assu (Hellmayr); Rio Capim (Wallace); Peixe-Boi, Rio Tocantins, Rio Jamauchim (Snethlage); also Rio Tocantins and Rio Tapajoz (Zimmer)

1 ♂ 2 ♀, Rio Tapajoz, east bank

1 ♂ 3 ♀, Benevides (Carnegie Mus.)

2 ♂ 4 ♀, Santarem (do.)

2 ♂ 4 ♀, Rio Tapajoz, both banks (do.)

Family FORMICARIIDAE

506. CYMBILAIMUS LINEATUS LINEATUS (Leach)

Type locality: Berbice, British Guiana

Rio Jary (Snethlage); Rio Jamundá, Faro (Snethlage and Zimmer)

2 ♂ 2 ♀, Obidos (Carnegie Mus.)

507. CYMBILAIMUS LINEATUS INTERMEDIUS (Hartert and Goodson)

Type locality: Rio Madeira, Brazil

Rio Tocantins, Rio Xingú, Rio Tapajoz (numerous localities, Snethlage and Zimmer)

15 ♂ 2 ♀, Rio Tapajoz, various localities, east bank

5 ♂ 7 ♀, Santarem (Carnegie Mus.)

4 ♂ 2 ♀, Rio Tapajoz, both banks (do.)

It is surprising that this Ant-Shrike should be lacking from the Pará region.

508. FREDERICKENA VIRIDIS (Vieillot)

Type locality: Cayenne

10 ♂ 4 ♀, Obidos (Carnegie Mus.)

It is curious that this Ant-Shrike should as yet be unreported from Brazil north of the Amazon.

509. TARABA MAJOR SEMIFASCIATUS (Cabanis)

Type locality: Pará

Pará, (Layard, Natterer, Stone, Wallace); Rio Guamá, Castanhal (Stone);

Igarapé-Assu, S. Antonio do Prata, Peixe-Boi (Hellmayr); Quati-puru,

Rio Guamá, Rio Moju, Rio Tapajoz, Arumanduba, Monte Alegre, Obidos,

Rio Jamundá (Snethlage); Rio Tocantins, Rio Xingú, Villa Bella Impera-

triz (Zimmer); Santarem (Hellmayr, Chapman and Riker)

1 ♂ 1 ♀, Rio Tapajoz, east bank

2 ♀, near Obidos

2 ♂, Obidos (Carnegie Mus.)

1 ♂ 1 ♀, Benevides (do.)

5 ♂ 2 ♀, Santarem (do.)

3 ♂ 1 ♀, Rio Tapajoz (do.)

510. *SAKESPHORUS LUCTUOSUS LUCTUOSUS* (Lichtenstein)

Type locality: Cametá, Rio Tocantins

Rio Tocantins, Rio Xingú, Rio Iriri, Rio Tapajoz, Rio Jamauchim, Arumanduba, Monte Alegre, Rio Maecuru, Obidos, Rio Jamundá (all Snethlage under the genus *Myrmelastes*); Santarem (Chapman and Riker, Hellmayr)

3 ♂ 1 ♀, Pará, Val-de-Caes

2 ♂ 2 ♀, Obidos (Carnegie Mus.)

9 ♂ 9 ♀, Santarem (do.)

2 ♂ 2 ♀, Rio Tapajoz, both banks (do.)

4 ♂ 5 ♀, Rio Tapajoz, various localities, east bank

2 ♂ 1 ♀, near Obidos

It seems surprising that this characteristic lower Amazonian species should have escaped detection previously in the Pará region. The typical form ranges west to the Rio Madeira and is represented in the interior of Goyaz by the little known *araguayae* Hellmayr. *S. hagmanni* Mir.-Ribeiro would appear to be a synonym of the typical form.

511. *THAMNOPHILUS DOLIATUS DOLIATUS* (Linnaeus)

Type locality: Surinam

Marajo Island (Sclater and Salvin, Allen, Snethlage, Hellmayr; Castanhal, near Pará, Amapá, Monte Alegre (Snethlage); Caviana Island (Brodkorb)

512. *THAMNOPHILUS DOLIATUS DIFFICILIS* Hellmayr

Type locality: Rio Claro, Goyaz, Brazil

Tocantins River (*vide* Hellmayr, 1929)

513. *THAMNOPHILUS DOLIATUS SIGNATUS* Zimmer, 1933

Type locality: Santarem, Brazil

Santarem, (Chapman and Riker, Pinto); Rio Tapajoz, Villa Bella Imperatriz Rio Jamundá (Zimmer); Obidos (Pelzel)

1 ♂ 2 ♀, Rio Tapajoz, Santarem

4 ♂ 5 ♀, Santarem (Carnegie Mus.)

6 ♂ 9 ♀, Obidos (Carnegie Mus.)

This race is little more than a variable series of intermediates.

514. *THAMNOPHILUS PALLIATUS PALLIATUS* (Lichtenstein)

Type locality: Bahia, Brazil

Pará (Layard, Stone, Pinto); S. Antonio do Prata (Hellmayr); Quati-puru, Bragança, Rio Guamá, Rio Moju, Rio Tocantins, Rio Tapajoz (Snethlage and Zimmer)

4 ♂ 3 ♀, Benevides (Carnegie Mus.)

Zimmer combines this species with the upper Amazonian *tenuipunctatus*, reviving *puncticeps* Sclater as the connecting form, which ranges from the Rio Madeira to northeastern Peru (cf. Amer. Mus. Novit., no. 646, pp. 9-15).

515. *THAMNOPHILUS NIGROCINEREUS NIGROCINEREUS* Sclater

Type locality: Rio Tocantins

Mexiana Island (Wallace, Hellmayr, Hagmann); Ilha das Oncas, Marajo Island, Arumanduba, Monte Alegre (Snethlage)

9 ♂ 2 ♀, Pará, Val-de-Caes

1 ♂ 1 ♀, Rio Tocantins, Cametá

516. *THAMNOPHILUS NIGROCINEREUS HUBERI* Snethlage

Type locality: Ilha de Goyana, Rio Tapajoz

Santarem (Zimmer)

10 ♂ 4 ♀, type locality (Carnegie Mus.)

1 ♂, Rio Tapajoz, Itaituba (do.)

9 ♂ 14 ♀, Santarem, (do.)

The Santarem series is easily separable from the topotypes. Males are minutely paler and greyish on the abdomen, while females are a noticeably less rich rufescent brown below.

517. *THAMNOPHILUS AETHIOPS PUNCTULIGER* Pelzeln

Type locality: Borba, Rio Madeira

Villa Bella Imperatriz, Rio Jamundá, Faro and Rio Tapajoz, west bank (Zimmer)

11 ♂ 13 ♀, Rio Tapajoz, Villa Braga (Carnegie Mus.)

518. *THAMNOPHILUS AETHIOPS ATRICEPS* Todd

Type locality: Miritituba, Rio Tapajoz

Rio Tapajoz, right or east bank (Todd and Zimmer)

3 ♂ 2 ♀, type locality

6 ♂ 3 ♀, Rio Tapajoz, type series (Carnegie Mus.)

4 ♂ 3 ♀, Santarem (do.)

519. *THAMNOPHILUS AETHIOPS INCERTUS* Pelzeln

Type locality: Pará

Numerous records by all collectors from the Pará region to the right bank of the Rio Tocantins; see especially Snethlage and Zimmer

4 ♂ 2 ♀, Pará, Bosque, and Val-de-Caes

1 ♀, Rio Acará, Acará

13 ♂ 9 ♀, Benevides (Carnegie Mus.)

The Acará female is remarkably distinct in having the belly and abdomen whitish in striking contrast with the tawny chest.

520. *THAMNOPHILUS SCHISTACEUS INORNATUS* Ridgway

Type locality: Diamantina, Santarem, Brazil

Rio Tapajoz, left bank (Snethlage and Zimmer); the right bank (Zimmer);

Rio Tocantins and Rio Xingú (Zimmer); Santarem (Chapman and Riker)

16 ♂ 16 ♀, Rio Tapajoz, east bank

10 ♂ 8 ♀, Santarem (Carnegie Mus.)

10 ♂ 8 ♀, Rio Tapajoz, both banks

Recorded by Snethlage as *Dsyithamnus schistaceus* and *squamosus*. Birds from the left bank of the Rio Tapajoz have often been referred to typical *schistaceus* D'Orbigny.

521. *THAMNOPHILUS MURINUS CAYENNENSIS* Todd

Type locality: Pied Saut, French Guiana

Obidos, Rio Jamundá, Faro (Snethlage)

11 ♂ 9 ♀, Obidos (Carnegie Mus.)

This species does not occur on the south side of the Amazon in our rea, but *canipennis* Todd crosses the river on the left bank of the Rio Madeira.

522. *THAMNOPHILUS PUNCTATUS PUNCTATUS* (Shaw)

Type locality: Cayenne

Rio Jary, Rio Maecuru, Monte Alegre, Obidos, Rio Jamundá (Snethlage) and also Marajo Island according to Snethlage; numerous additional specimens from the north bank recorded by Zimmer

6 ♂ 2 ♀, Obidos (Carnegie Mus.)

523. *THAMNOPHILUS PUNCTATUS SATURATUS* Todd

Type locality: Villa Braga, left bank, Rio Tapajoz

Both banks of the Rio Tapajoz (Zimmer)

1 ♀, Rio Tapajoz, left bank, Pinhel

7 ♂ 1 ♀, Rio Tapajoz, right bank, Santarem, etc. (Carnegie Mus.)

524. *THAMNOPHILUS PUNCTATUS STICTOCEPHALUS* Pelzeln

Type locality: São Vicente, Matto Grosso

Right bank of Rio Xingú and left bank, Rio Tocantins (Zimmer)

1 ♂ from Val-de Caes is apparently this race in having the crown feathers extensively white basally, but we have no comparable material. For notes on the identity of this form, cf. Zimmer, 1933, p. 11.

525. *THAMNOPHILUS AMAZONICUS AMAZONICUS* Sclater

Type locality: Rio Javary, upper Amazon

Villa Bella Imperatriz (Zimmer); Rio Tapajoz, left bank (Snethlage)

3 ♂ 6 ♀, Rio Tapajoz, Villa Braga (Carnegie Mus.)

526. *THAMNOPHILUS AMAZONICUS OBSCURUS* Zimmer

Type locality: Tauary, Rio Tapajoz

Rio Tapajoz, right bank and Rio Xingu, right bank (Zimmer)

12 ♂ 15 ♀, Rio Tapajoz, east bank

1 ♂ 1 ♀, Santarem (Carnegie Mus.)

5 ♂ 2 ♀, Rio Tapajoz, Miritituba

527. *THAMNOPHILUS AMAZONICUS PARAENSIS* Todd

Type locality: Benevides, Pará

Innumerable records near Pará (all collectors) west to the Rio Tocantins (Snethlage and Zimmer); on the north bank, Rio Jary (Snethlage) and Rio Jamundá, Faro (Zimmer)

4 ♂ 1 ♀, Pará, Val-de-Caes

6 ♂ 4 ♀, Rio Acará, Acará

In spite of Zimmer's helpful critique on the distinguishing characters of males of this species and *punctatus*, we would just as soon refer some of the males listed above to *punctatus*, were it not for the fact that that species is not recorded from the vicinity of Pará.

528. *PYGIPTILA STELLARIS STELLARIS* (Spix)

Type locality: province of Pará

Pará (Spix, Stone); Utinga, S. Antonio do Prata, Ipitinga (Hellmayr); Rio Tocantins, Rio Xingú, Rio Iriri, Rio Curuá, Rio Tapajoz, Rio Jamauchim (Snethlage); large series from Utinga to Villa Bella Imperatriz (Zimmer)

1 ♀, Rio Acará, Acará

6 ♂ 3 ♀, Rio Tapajoz, east bank

9 ♂, Santarem (Carnegie Mus.)

22 ♂, 8 ♀, Rio Tapajoz, both banks (do.)

529. *DYSITHAMNUS MENTALIS EMILIAE* Hellmayr

Type locality: S. Antonio do Prata, Brazil

Rio Capim (Goeldi); Quati-puru (Hellmayr); Peixe-Boi, Rio Guamá, Rio Tocantins (Snethlage)

530. *DYSITHAMNUS ARDESIACUS OBIDENSIS* Snethlage

Type locality: Obidos, Brazil

Rio Jary and Obidos (Snethlage); Rio Jamundá, Faro (Zimmer)

14 ♂ 3 ♀, Obidos (Carnegie Mus.)

531. *DYSITHAMNUS ARDESIACUS SATURNINUS* (Pelzeln)

Type locality: Borba, Rio Madeira

Rio Tapajoz, left bank (Snethlage and Zimmer); Villa Bella Imperatriz (Zimmer)

16 ♂ 4 ♀, Rio Tapajoz, Villa Braga and Apaçy (Carnegie Mus.)

The interrupted distribution of this genus in Lower Amazonia is of interest. In particular the species *mentalis* is lacking between the Rio Tocantins and northern Matto Grosso.

532. THAMNOMANES CAESIUS HOFFMANSI Hellmayr

Type locality: S. Antonio do Prata, Pará

Pará, Castanhal, Rio Inhangapy (Stone); Igarapé-Assu and Peixe-Boi (Hellmayr); numerous localities near Pará to Rio Tocantins (Snethlage); Rio Xingú (Zimmer)

2 ♂ 1 ♀, Pará, Bosque

2 ♂ 1 ♀, Rio Acará, Acará

533. THAMNOMANES CAESIUS PERSIMILIS Hellmayr

Type locality: Teffe, Rio Solimões, Brazil

Rio Tapajoz, left bank (Hellmayr, Snethlage, Zimmer); birds variously intermediate are recorded from the right bank of the Rio Tapajoz, Rio Jamau-chim and Santarem (Hellmayr, Snethlage and Zimmer)

18 ♂ 15 ♀, Rio Tapajoz, various localities, east bank

2 ♂ 7 ♀, Santarem (Carnegie Mus.)

5 ♂ 12 ♀, Rio Tapajoz, both banks

This is much the largest series studied from this intermediate area. The females in particular are clearly nearer *persimilis* than *hoffmansii*.

534. THAMNOMANES CAESIUS GLAUCUS Cabanis

Type locality: Cayenne

Rio Jary and Obidos (Snethlage); Rio Jamundá, Faro and Obidos (Zimmer)

10 ♂ 8 ♀, Obidos (Carnegie Mus.)

The great series in the Carnegie Museum do not endorse Hellmayr's treatment of this group. Seven males and a female from Sao Paulo de Olivença, Rio Solimões, are absolutely inseparable from Cayenne topotypes, indicating that this form ranges much further west in northern Brazil than the Rio Negro. Collected at the same place and on the same day is a typical female of *schistogynus* Hellmayr, surely a curious state of affairs, as this is also a notable range extension. Judging by Zimmer's comments on his Peruvian material and his difficulties with it, it begins to look as if *schistogynus* were specifically distinct.

535. *MYRMOTHERULA BRACHYURA BRACHYURA* (Hermann)

Type locality: Cayenne

Rio Jary and Obidos (Snethlage); Rio Tocantins, Rio Tapajoz and Rio Jamau-chim (Snethlage); Rio Jamundá, Faro (Zimmer)

1 ♂, Rio Tapajoz, Pinhy

10 ♂ 6 ♀, Obidos (Carnegie Mus.)

9 ♂ 5 ♀, Santarem (do.)

18 ♂ 9 ♀, Rio Tapajoz, both banks (do.)

536. *MYRMOTHERULA SCLATERI* Snethlage

Type locality: Boim, Rio Tapajoz, Brazil

Large series from the right bank of the same river (Zimmer) and others in the Carnegie Museum

1 ♂, Rio Tapajoz, Caxiricatuba

1 ♀, Santarem (Carnegie Mus.)

1 ♂ 1 ♀, Rio Tapajoz, Villa Braga and Aveiros (do.)

There are 7 ♂ 3 ♀, from the Rio Purus (Carnegie Mus.), a notable range extension.

537. *MYRMOTHERULA SURINAMENSIS SURINAMENSIS* (Gmelin)

Type locality: Surinam

Obidos (Pinto); Rio Jamundá, Faro (Snethlage)

1 ♀, Obidos (Carnegie Mus.)

538. *MYRMOTHERULA SURINAMENSIS MULTOSTRIATA* Sclater

Type locality: Ucayali River, east Peru

Peixe-Boi and S. Antonio do Prata (Hellmayr); numerous localities from Rio Guamá to Rio Tapajoz, (Snethlage); Villa Bella Imperatriz (Zimmer)

2 ♂ 3 ♀, Rio Tapajoz, both banks (Carnegie Mus.)

539. *MYRMOTHERULA KLAGESI* Todd

Type locality: Santarem, Brazil

Also islands in the Amazon near Obidos (Todd)

1 ♀ ad., near Obidos, Boca do Igarapé-Piaba

4 ♂, Obidos (Carnegie Mus.)

3 ♂ 2 ♀, Santarem (do.)

This "species" connects the last with *cherriei* Berlepsch and Hartert of the upper Orinoco.

540. MYRMOTHERULA GUTTATA (Vieillot)

Type locality: Cayenne

Rio Jary and Obidos (Snethlage)

16 ♂ 6 ♀, Obidos (Carnegie Mus.)

541. MYRMOTHERULA HAUXWELLI CLARIOR Zimmer

Type locality: Rio Andirá, west of the Rio Tapajoz, Brazil

Rio Tapajoz, both banks and Rio Jamauchim (Snethlage); same localities and Villa Bella Imperatriz (Zimmer)

1 ♂, Rio Tapajoz, Caxiricatuba

9 ♂ 6 ♀, Santarem (Carnegie Mus.)

4 ♂ 5 ♀, Rio Tapajoz, both banks (do.)

542. MYRMOTHERULA HAUXWELLI HELLMAYRI Snethlage

Type locality; near Pará, Brazil

Peixe-Boi, Igarapé-Assu, S. Antonio do Prata (Hellmayr); Rio Capim (Wallace); numerous localities, Pará (Stone) to Rio Tocantins (Snethlage); Rio Xingi (Zimmer)

3 ♀, Pará, Bosque

1 ♀, Rio Acará, Acará

7 ♂ 7 ♀, Benevides (Carnegie Mus.)

543. MYRMOTHERULA GUTTURALIS Salvin and Godman

Type locality: Bartica Grove, British Guiana

Rio Jary and Obidos (Snethlage); Faro (Zimmer)

6 ♂ 5 ♀, Obidos (Carnegie Mus.)

This species represents *erythrura* of upper Amazonia.

544. MYRMOTHERULA LEUCOPHTHALMA PHAEONOTA Todd

Type locality: Villa Braga, left bank, Rio Tapajoz

Numerous localities, left bank Rio Tapajoz (Snethlage, Todd, Zimmer)

1 ♀, Rio Tapajoz, Pinhel

12 ♂ 5 ♀, Rio Tapajoz, left bank (Carnegie Mus.)

This Ant-Wren is sometimes considered to be a race of *haematonota*.

545. *MYRMOTHERULA LEUCOPHTHALMA SORDIDA* Todd

Type locality: Colonia do Mojuy, Santarem, Brazil

Marajo Island, Rio Tocantins, Rio Xingu, Rio Jamauchim (Snethlage)

6 ♂ 8 ♀, Santarem (Carnegie Mus.)

11 ♂ 14 ♀, Rio Tapajoz, east bank (M.C.Z.)

3 ♂ 7 ♀, (do.), (do.) (Carnegie Mus.)

546. *MYRMOTHERULA ORNATA HOFFMANNI* Hellmayr

Type locality: Itaituba, Rio Tapajoz, Brazil

Rio Tocantins to Rio Tapajoz (Snethlage, Zimmer, Pinto)

5 ♂ 4 ♀, Rio Tapajoz, east bank

5 ♂ 5 ♀, Santarem (Carnegie Mus.)

7 ♂ 9 ♀, Rio Tapajoz, both banks

547. *MYRMOTHERULA AXILLARIS AXILLARIS* (Vieillot)

Type locality: Cayenne

S. Antonio do Prata (Hellmayr); Rio Capim (Wallace); Peixe-Boi and Ipitinga (Hellmayr); Santarem (Chapman and Riker; Hellmayr); Obidos (Hellmayr, Pinto); great series from entire area (Snethlage and Zimmer)

1 ♂, Rio Acará, Acará

16 ♂ 6 ♀, Rio Tapajoz, east bank

2 ♂ 2 ♀, Obidos (Carnegie Mus.)

3 ♂, Benevides (do.)

15 ♂ 6 ♀, Santarem (do.)

13 ♂ 6 ♀, Rio Tapajoz, both banks (do.)

548. *MYRMOTHERULA LONGIPENNIS LONGIPENNIS* Pelzelin

Type locality: Marabitanas, Rio Negro

San Antonio de Cachoeira, Rio Jary (Snethlage)

549. *MYRMOTHERULA LONGIPENNIS OCHROGYNA* Todd

Type locality: Villa Braga, left bank, Rio Tapajoz

Villa Bella Imperatriz (Zimmer); left bank of the Tapajoz (Snethlage and Zimmer)

11 ♂ 5 ♀, type locality (Carnegie Mus.)

550. MYRMOTHERULA LONGIPENNIS PARAENSIS (Todd)

Type locality: Benevides, Pará

Igarapé-Assu, S. Antonio do Prata, Peixe-Boi (Hellmayr); Rio Capim (Wallace); numerous localities Rio Guamá and Pará region to right bank of Rio Tapajoz (Snethlage and Zimmer, Stone)

1 ♂, Pará, Bosque

3 ♂ 3 ♀, Rio Tapajoz, east bank

8 ♂ 5 ♀, Benevides (Carnegie Mus.)

8 ♂ 1 ♀, Rio Tapajoz, east bank (do.)

551. MYRMOTHERULA IHERINGI IHERINGI Snethlage

Type locality: Boim, left bank of Rio Tapajoz

Boim and Villa Braga (Snethlage)

1 ♂, Villa Braga (ex Carnegie Mus.)

8 ♂ 4 ♀, Villa Braga (do.)

This little known species is closely related to *minor* Salvadori of southeastern Brazil and *garbei* Ihering of the Rio Juruá. It is otherwise known only from the Rio Madeira and northern Matto Grosso.

552. MYRMOTHERULA MENETRIESII CINEREIVENTRIS Sclater & Salvin

Type locality: Cayenne

Rio Jary and Obidos (Snethlage); Rio Jamundá, Faro (Zimmer)

1 ♂ 2 ♀, Obidos (Carnegie Mus.)

553. MYRMOTHERULA MENETRIESII OMISSA Todd

Type locality: Benevides, Pará

Igarapé-Assu, S. Antonio do Prata, Peixe-Boi (Hellmayr); Santarem (Chapman and Riker); numerous localities, Rio Guamá to Rio Jamauchim (Snethlage); Rio Tapajoz, Tauary (Zimmer)

1 ♀, Rio Acará, Acará

9 ♂ 6 ♀, Rio Tapajoz, east bank

3 ♂ 2 ♀, (do.) (do.) (Carnegie Mus.)

6 ♂ 2 ♀, Benevides (do.)

2 ♂ 1 ♀, Santarem (do.)

554. MYRMOTHERULA MENETRIESII BERLEPSCHI Hellmayr

Type locality: Salto do Girao, Rio Madeira

left bank of Rio Tapajoz (Snethlage and Hellmayr)

13 ♂ 5 ♀, Rio Tapajoz, west bank (Carnegie Mus.)

555. MYRMOTHERULA ASSIMILIS Pelzeln

Type locality: below Barcellos, Rio Negro

Santarem (Ihering); Rio Jamundá, Faro (Snethlage, Zimmer); Villa Bella Imperatriz (Zimmer)

1 ♂ 1 ♀, near Obidos

1 ♂ 1 ♀, Obidos (Carnegie Mus.)

18 ♂ 13 ♀, Santarem (do.)

This rare species has a curious distribution, suggesting incomplete knowledge. It is well represented from the Rio Negro and the Rio Madeira, and turns up in northeastern Peru.

556. DICHROZONA CINCTA ZONONOTA Ridgway

Type locality: Diamantina, Santarem, Brazil

Diamantina (Chapman and Riker); Villa Bella Imperatriz and Rio Tapajoz (Zimmer)

1 ♂ 2 ♀, Rio Tapajoz, Pinhy and Pataua

2 ♂, Santarem (Carnegie Mus.)

15 ♂ 6 ♀, Rio Tapajoz (do.)

A rare antbird with a widely scattered distribution in upper Amazonia.

557. HERPSILOCHMUS STICTURUS STICTURUS Salvin

Type locality: Bartica Grove, British Guiana

2 ♂, Obidos (Carnegie Mus.)

Previously unrecorded from Brazil.

558. HERPSILOCHMUS RUFIMARGINATUS FRATER Sclater and Salvin

Type locality: Sarayacu, east Ecuador

Peixe-Boi and Marajo Island (Snethlage)

1 ♂, Rio Tapajoz, Caxiricatuba

2 ♂ 1 ♀, Benevides (Carnegie Mus.)

2 ♀, Santarem (do.)

In default of topotypical material, we can only follow Hellmayr in referring lower Amazonian specimens to *frater*. The bird is still very rare in collections.

559. *MICRORHOPIAS QUIXENSIS BICOLOR* (Pelzeln)

Type locality: Rio Madeira

Itaituba (Hellmayr); left bank of Rio Tapajoz (Snethlage and Zimmer);

Villa Bella Imperatriz (Zimmer)

29 ♂ 22 ♀, Rio Tapajoz, left bank (Carnegie Mus.)

560. *MICRORHOPIAS QUIXENSIS EMILIAE* Chapman

Type locality: Alta Mira. Rio Xingú

Rio Tocantins (Chapman); Rio Tapajoz, right bank (Zimmer)

2 ♂ 3 ♀, Santarem (Carnegie Mus.)

4 ♂ 3 ♀, Rio Tapajoz, right bank (do.)

561. *MICRORHOPIAS QUIXENSIS MICROSTICTA* (Berlepsch)

Type locality: Rio Approuague, French Guiana

Rio Jary and Arumanduba (Snethlage)

562. *FORMICIVORA GRISEA GRISEA* (Boddaert)

Type locality: Cayenne

Pará (Layard, Natterer, Stone); Castanhal (Stone); S. Antonio do Prata (Hellmayr); Rio Capim (Goeldi); Santarem (Chapman and Riker; Hellmayr, Pinto); numerous localities, Pará, Rio Guamá and Marajo Island to left bank of Rio Tocantins, Amapá, and Monte Alegre on north bank (Snethlage)

4 ♂ 2 ♀, Pará, Val-de-Caes

8 ♂ 10 ♀, Rio Tapajoz, east bank

7 ♂ 3 ♀, Benevides (Carnegie Mus.)

7 ♂ 9 ♀, Santarem (do.)

5 ♂ 4 ♀, Rio Tapajoz (do.)

563. *FORMICIVORA RUFA CHAPMANI* Cherrie

Type locality: Altar do Chao, Rio Tapajoz

Santarem (Chapman and Riker; Pinto); Rio Acará, Monte Alegre, Serra de Ereré, Rio Maecuru (Snethlage)

5 ♂ 4 ♀, Rio Tapajoz, Santarem

12 ♂ 7 ♀, Santarem (Carnegie Mus.)

Birds from the north bank of the Amazon in the Museu Goeldi may represent an undescribed form.

564. *DRYMOPHILA DEVILLEI* SUBOCHRACEA Chapman

Type locality: Rio Curua, lower Rio Xingú

Known only from the ♀ type

565. *TERENURA SPODIOPTILA ELAEOPTERYX* Leverkühn

Type locality: Cayenne

S. Antonio da Cachoeira, Rio Jary (Snethlage); Rio Jamundá, Faro (Zimmer)

2 ♂ 1 ♀, Obidos (Carnegie Mus.)

566. *TERENURA SPODIOPTILA MERIDIONALIS* Snethlage

Type locality: Villa Braga, Rio Tapajoz

Rio Tapajoz, left bank (Zimmer)

2 ♂ 2 ♀, Rio Tapajoz, Villa Braga (Carnegie Mus.)

567. *CERCOMACRA CINERASCENS IMMACULATA* Chubb

Type locality: Supenaam, British Guiana

Rio Jamundá, Faro (Zimmer)

13 ♂ 4 ♀, Obidos (Carnegie Mus.)

568. *CERCOMACRA CINERASCENS ITERATA* Zimmer

Type locality: Caxiricatuba, Rio Tapajoz

Igarapé-Assu, S. Antonio do Prata, Santarem (Hellmayr); Rio Guamá, Rio Capim, Rio Tocantins, Rio Jamauchim, Rio Tapajoz left bank (Snethlage); Rio Tocantins and Rio Tapajoz (Zimmer)

2 ♂, Rio Tapajoz west bank, Pinhel

6 ♂ 2 ♀, Rio Tapajoz east bank, various localities

2 ♂, Benevides (Carnegie Mus.)

3 ♂ 4 ♀, Santarem (do.)

17 ♂ 8 ♀, Rio Tapajoz, both banks (do.)

569. *CERCOMACRA TYRANNINA LAETA* Todd

Type locality: Benevides, Pará

Pará (Layard, Natterer, Stone); Igarapé-Assu, S. Antonio do Prata, Peixe-Boi, Ipitinga, Obidos (Hellmayr); numerous localities, Rio Guamá, Pará region to Rio Tocantins, and whole of north bank to Rio Jamundá (Snethlage)

6 ♂ 5 ♀, Pará, Bosque, and Val-de-Caes

8 ♂ 11 ♀, Obidos (Carnegie Mus.)

11 ♂ 4 ♀, Benevides (do.)

570. *CERCOMACRA NIGRESCENS* (Cabanis and Heine)

Type locality: Cayenne

Rio Jamundá, Faro (Snethlage)

1 ♂, Obidos (Carnegie Mus.)

571. *CERCOMACRA NIGRESCENS APPROXIMANS* Pelzeln

Type locality: Engenho do Gama, Matto Grosso

Santarem (Hellmayr); Rio Tocantins, Rio Tapajoz, left bank (Snethlage);

Villa Bella Imperatriz and other localities (Zimmer)

10 ♂ 8 ♀, Rio Tapajoz, east bank

12 ♂ 7 ♀, (do.), both banks (Carnegie Mus.)

10 ♂ 5 ♀, Santarem (do.)

572. *PYRIGLENA LEUCOPTERA LEUCONOTA* (Spix)

Type locality: Pará, Brazil

Pará (Spix, Layard, Natterer, Wallace, Stone); Souza, Igarapé-Assu, Peixe-

Boi, S. Antonio do Prata (Hellmayr); Murutucu (Munich Museum);

numerous localities, Rio Guamá, Pará region to Rio Tocantins and Rio Curuá (Snethlage); Utinga (Pinto)

7 ♂ 4 ♀, Pará, Val-de-Caes

1 ♀, Rio Acará, Acará

3 ♂, Rio Tocantins, Cametá

12 ♂ 10 ♀, Benevides (Carnegie Mus.)

573. *PYRIGLENA LEUCOPTERA SIMILIS* Zimmer, 1931

Type locality: Caxiricatuba, Rio Tapajoz

2 ♂ 5 ♀, Rio Tapajoz, Santarem

3 ♂ 1 ♀, (do.), both banks (Carnegie Mus.)

9 ♂ 3 ♀, Santarem (do.)

574. *MYRMOBORUS LEUCOPHRYS* subsp.

Itaituba (Hellmayr); Rio Tocantins and Rio Jamauchim (Snethlage and Zimmer)

8 ♂ 3 ♀, Rio Tapajoz, both banks (Carnegie Mus.)

Zimmer's study of this species (Amer. Mus. Novit., no. 545, 1932, pp. 1-5) lists a "subsp. ?" of which he had been able to examine only 2 specimens from the Rio Tocantins and 1 from the Rio Jamauchim. His *griseigula* was based on a series from the left bank of the Rio

Madeira. The adult male is closest to *angustirostris*, merely averaging a little darker on the belly. The females, however, differ in just the respects ascribed by Zimmer to *griseigula*, but the under tail-coverts are almost pure white instead of buffy brown. We have here a rather poorly characterized intermediate, which Mr. Todd does not care to describe. With no material of our own we are unable to do so either, but somebody will most certainly do so in the future.

575. *MYRMOBORUS LEUCOPHRYS ANGUSTIROSTRIS* (Cabanis)

Type locality: coastal forests of British Guiana, Cunany, Rio Jary, Rio Maecuru (Snethlage)

576. *MYRMOBORUS LUGUBRIS LUGUBRIS* (Cabanis)

Type locality: Pará, Brazil

Santarem (Chapman and Riker); Monte Alegre, Obidos, Rio Jamundá (Snethlage); Rio Tocantins, Rio Xingú, Villa Bella Imperatriz (Zimmer)

1 ♂, Pará, Val-de-Caes

6 ♂ 4 ♀, north bank of Amazon near Obidos

1 ♂, Rio Tapajoz, Santarem

7 ♂, Obidos (Carnegie Mus.)

16 ♂ 13 ♀, Santarem (do.)

577. *MYRMOBORUS MYOTHERINUS OCHROLEMA* (Hellmayr)

Type locality: Itaituba, left bank, Rio Tapajoz

Rio Tocantins, Rio Xingú, Rio Jamauchim, Rio Tapajoz (Snethlage and Zimmer)

4 ♂, Pará, Val-de-Caes

8 ♂ 4 ♀, Rio Tapajoz, east bank

1 ♀, Rio Tapajoz, west bank (Pinhel)

19 ♂ 12 ♀, Santarem (Carnegie Mus.)

15 ♂ 9 ♀, Rio Tapajoz, both banks (do.)

We cannot find that this species has been reported east of the Rio Tocantins. The four Pará males are minutely paler below, but unfortunately we have no females.

578. *HYPOCNEMIS CANTATOR CANTATOR* (Boddaert)

Type locality: Cayenne

Obidos, (Hellmayr, Snethlage, Zimmer, Pinto); Rio Jamundá, Faro (Snethlage and Zimmer)

2 ♂ 1 ♀, Obidos (Carnegie Mus.)

579. *HYPOCNEMIS CANTATOR AFFINIS* Zimmer, 1932

Type locality: Baião, Rio Tocantins

Rio Tocantins and Rio Xingú, right bank (Snethlage, Zimmer)

580. *HYPOCNEMIS CANTATOR STRIATA* (Spix)

Type locality: Santarem

Rio Jamauchim, Rio Tapajoz, both banks (Snethlage and Zimmer)

12 ♂ 11 ♀, 2 ? , Rio Tapajoz, both banks

7 ♂ 3 ♀, Santarem (Carnegie Mus.)

9 ♂ 5 ♀, Rio Tapajoz, both banks (do.)

581. *HYPOCNEMIS CANTATOR IMPLICATA* Zimmer, 1932

Type locality: near Borba, Rio Madeira

Villa Bella Imperatriz (Zimmer)

582. *HYPOCNEMIS HYPOXANTHA OCHRACEIVENTRIS* Chapman

Type locality: Alta Mira, Rio Xingú

Rio Tapajoz, east bank, (Carnegie Mus. and Zimmer)

5 ♂ 4 ♀, Rio Tapajoz, east bank

15 ♂ 8 ♀, Rio Tapajoz, (do.), (Carnegie Mus.)

583. *HYPOCNEMOIDES MELANOPOGON MELANOPOGON* (Scalter)

Type locality: Guiana

North bank, Rio Jary, Arumanduba, Obidos, Rio Jamundá (Snethlage);

Mexiana Island (Wallace, Hellmayr); Rio Tocantins (Snethlage, Zimmer);

Rio Xingú, Rio Tapajoz, Villa Bella Imperatriz (Zimmer)

3 ♂, Pará, Val-de-Caes

2 ♂ 1 ♀, near Obidos

1 ♂ 2 ♀, Obidos (Carnegie Mus.)

5 ♂ 4 ♀, Santarem (do.)

Snethlage and Hellmayr have both commented on the peculiarly overlapping ranges of *melanopogon* and *maculicauda*. Recent collections show that there is little or nothing in this; the Pará specimens of *melanopogon* listed above now show that species to have a continuous range on the south bank of the Amazon.

584. *HYPOCNEMOIDES MACULICAUDA* (Pelzeln)

Type locality: Matta Grosso

Rio Capim (Goeldi); Pará, S. Antonio do Prata, Rio Acará, Rio Iriri, Rio Jamauchim, Rio Tapajoz (Snethlage)

2 ♂ 1 ♀, Rio Tapajoz, east bank

7 ♂ 8 ♀, (do.) both banks (Carnegie Mus.)

It will be noted that both species are now known from the Pará region and the east bank of the Tapajoz.

585. *PERCNOSTOLA RUFIFRONS RUFIFRONS* (Gmelin)

Type locality: Cayenne

San Antonio do Cachoeira, Rio Jary, Obidos (Snethlage, Hellmayr, Zimmer, Pinto)

10 ♂ 9 ♀, Obidos (Carnegie Mus.)

586. *PERCNOSTOLA RUFIFRONS SUBCRISTATA* Hellmayr

Type locality: Manaos

Rio Jamundá, Faro, (Snethlage, Zimmer)

587. *SCLATERIA NAEVIA NAEVIA* (Gmelin)

Type locality: Surinam

Pará, Peixe-Boi, Rio Acará (Hellmayr); Pará, S. Antonio do Prata, Ilha das Oncas, Rio Acará (Snethlage); Pará (Stone)

The series from Obidos are perfect intermediates between this and the next.

588. *SCLATERIA NAEVIA TODDI* Hellmayr

Type locality: Santarem, Brazil

1 ♀, Rio Tapajoz, Tauary

3 ♂ 2 ♀, Obidos (Carnegie Mus.)

5 ♂ 5 ♀, Santarem (do.)

1 ♂, Rio Tapajoz, Miritituba (do.)

589. *SCHISTOCICHLA LEUCOSTIGMA LEUCOSTIGMA* (Pelzeln)

Type locality: Manaos

Obidos (Hellmayr, 1929)

1 ♂, Obidos (Carnegie Mus.)

590. *SCHISTOCICHLA LEUCOSTIGMA RUFIFACIES* Hellmayr

Type locality: Apaçy, Rio Tapajoz, Brazil

Arumatheua, Rio Tocantins (Snethlage); Santarem and Villa Braga (Hellmayr); Villa Imperatriz and Serra do Parintins (Zimmer)

2 ♂ 1 ♀, Rio Tapajoz, east bank

1 ♀, Santarem (Carnegie Mus.)

3 ♂ 2 ♀, Rio Tapajoz, left bank, including type

591. *MYRMECIZA LONGIPES GRISEIPECTUS* Berlepsch & Hartert

Type locality: Caicara, Venezuela

Obidos (Hellmayr, Pinto); Monte Alegre, Ereré, Rio Maecuru (Snethlage)

1 ♂ imm., near Obidos

24 ♂ 11 ♀, Obidos (Carnegie Mus.)

592. *MYRMECIZA FERRUGINEA FERRUGINEA* (P.L.S. Müller)

Type locality: Cayenne

Cunany, Rio Jary, Obidos, Rio Jamundá (Snethlage); Obidos (Hellmayr, Pinto)

3 ♂ 1 ♀ Obidos (Carnegie Mus.)

593. *MYRMECIZA FERRUGINEA ELUTA* (Todd)

Type locality: Villa Braga, Rio Tapajoz

9 ♂ 6 ♀, Rio Tapajoz, left bank (Carnegie Mus.)

Only known from the type locality, where first found by Snethlage, to the right bank of the Rio Madeira.

594. *MYRMECIZA ATROTHORAX ATROTHORAX* (Boddaert)

Type locality: Cayenne

Rio Jamundá, Faro (Snethlage); Marajo Island (Snethlage)

The subspecies of the Marajo Island bird still remains to be determined.

595. *MYRMECIZA ATROTHORAX MELANURA* (Menetries)

Type locality: Cuyabá, Matto Grosso

Igarapé Brabo, left bank, Rio Tapajoz, 1 ♂ (Zimmer)

596. *MYRMECIZA ATROTHORAX STICTOTHORAX* (Todd)

Type locality: Apaçy, Rio Tapajoz

1 ♂ 1 ♀, Rio Tapajoz, Apaçy (Carnegie Mus.)

Only known from the two original specimens. As Zimmer very justly remarks, more material from the Tapajoz is needed.

597. *MYRMECIZA HEMIMELAENA PALLENS* Berlepsch and Hellmayr

Type locality: Villa Bella de Matto Grosso

Rio Xingú, Cussary, Tamucury, Rio Tapajoz (Snethlage)

16 ♂ 10 ♀, Rio Tapajoz, east bank

5 ♂ 5 ♀, (do.) both banks (Carnegie Mus.)

12 ♂ 11 ♀, Santarem (do.)

598. (*MYRMECIZA DUBIA* Snethlage)

Type locality: Rio Iriri (tributary of the Xingú)

Snethlage, in her original description (1925), places this species in the genus *Myrmeciza* with a good deal of doubt. She seems to have been under the impression that *Drymophila* Swainson is a synonym of *Myrmeciza* G. R. Gray. The type, which we suppose is in the Goeldi Museum at Pará, should be examined.

599. *FORMICARIUS COLMA COLMA* Boddaert

Type locality: Cayenne

Rio Jary and Obidos (Snethlage); Rio Jamundá, Faro (Zimmer)

2 ♂ 3 ♀, Obidos (Carnegie Mus.)

600. *FORMICARIUS COLMA AMAZONICUS* Hellmayr

Type locality: Borba, Rio Madeira

Pará (Natterer, Snethlage); Igarapé-assu, S. Antonio do Prata, Peixe-Boi, Ipitinga, (Hellmayr); Benevides, Sta. Isabel, Rio Tocantins, Rio Iriri, Rio Jamauchim, Rio Tapajoz, (Snethlage); Rio Tocantins, Rio Tapajoz, Villa Bella Imperatriz (Zimmer)

4 ♂ 2, Rio Tapajoz, both banks

13 ♂ 5 ♀, Santarem (Carnegie Mus.)

2 ♀, Rio Tapajoz, left bank (do.)

601. *FORMICARIUS ANALIS ANALIS* (Lafresnaye and D'Orbigny)

Type locality: Yuracares, Bolivia

Pará (Wallace, Stone); Rio Guamá (Stone); Peixe-Boi (Hellmayr); Providencia, Benevides, Maguary, Rio Guamá, Rio Acará, Rio Tocantins, Rio Tapajoz (Snethlage); Villa Bella Imperatriz (Zimmer)

4 ♂, Pará, Bosque, and Val-de-Caes

1 ♂, Rio Acará, Acará

1 ♂, Rio Tapajoz, Caxiricatuba

8 ♂ 3 ♀, Benevides (Carnegie Mus.)

6 ♂ 4 ♀, Santarem (do.)

3 ♂, Rio Tapajoz, both banks

602. *FORMICARIUS ANALIS CRISSALIS* (Cabanis)

Type locality: Roraima, British Guiana

Monte Alegre (Snethlage), the identification requiring confirmation

603. *CHAMAEZA NOBILIS FULVPECTUS* Todd

Type locality: Colonia do Mojuy, Santarem, Brazil

The type in Carnegie Museum examined.

604. *PITHYS ALBIFRONS ALBIFRONS* (Linnaeus)

Type locality: Cayenne

Obidos, Rio Jamundá, Faro (Snethlage and Zimmer)

4 ♂ 2 ♀, Obidos (Carnegie Mus.)

605. *GYMNOPITHYS RUFIGULA RUFIGULA* (Boddaert)

Type locality: Cayenne

Obidos and Rio Jamunda, Faro (Snethlage)

7 ♂ 4 ♀, Obidos (Carnegie Mus.)

606. *RHEGMATORHINA GYMNOPS* Ridgway

Type locality: Diamantina, near Santarem, Brazil

Santarem (Chapman and Riker); Rio Curuá, Rio Tapajoz, Rio Jamauchim (Snethlage); Rio Tapajoz (Pinto)

1 ♂ 1 ♀, Miritituba and Colonia de Mojuy, Rio Tapajoz

2 ♂ 4 ♀ 1 ?, (do.) (Carnegie Mus.)

3 ♂ 3 ♀, Santarem (Carnegie Mus.)

607. *RHEGMATORHINA BERLEPSCHI* (Snethlage)

Type locality: Villa Braga, left bank, Rio Tapajoz

Boim (Snethlage)

1 ♂ 1 ♀, Villa Braga

10 ♂ 10 ♀, (do.) (Carnegie Mus.)

608. *HYLOPHYLAX NAEVIA THERESAE* (Des Murs)

Type locality: Rio Javari, northeast Peru

Villa Braga, left bank of Rio Tapajoz (Hellmayr)

8 ♂ 9 ♀, Rio Tapajoz, left bank (do.)

Recorded by Snethlage as the next race. This locality marks the easternmost point in the range of *theresae*.

609. *HYLOPHYLAX NAEVIA OCHRACEA* (Berlepsch)

Type locality: Tucunaré, Rio Jamauchim

Rio Tocantins, Rio Xingú, Rio Tapajoz, right bank (Snethlage)

5 ♂, Rio Tapajoz, right bank

14 ♂ 6 ♀, (do.) (do.) (Carnegie Mus.)

1 ♀, Santarem (do.)

610. *HYLOPHYLAX PUNCTULATA SUBOCHRACEA* Zimmer, 1934

Type locality: Linoal, left bank, Rio Tapajoz

Rio Curuá (Snethlage, fide Hellmayr); Rio Tapajoz, both banks and Rio Xingú,

Tapara (Zimmer)

5 ♂, Rio Tapajoz, both banks (Carnegie Mus.)

3 ♂ 1 ♀, Santarem (do.)

611. *HYLOPHYLAX POECILONOTA POECILONOTA* (Cabanis)

Type locality: Cayenne

Obidos, (Snethlage); Rio Jamundá, Faro (Zimmer)

8 ♂ 2 ♀, Obidos (Carnegie Mus.)

612. *HYLOPHYLAX POECILONOTA NIGRIGULA* (Snethlage)

Type locality: Boim, Rio Tapajoz

Villa Bella Imperatriz and Rio Tapajoz, both banks (Zimmer)

9 ♂ 7 ♀, Rio Tapajoz, east bank

613. *HYLOPHYLAX POECILONOTA VIDUA* (Hellmayr)

Type locality: Igarapé-Assu, Rio Acará, Pará

Pará, Peixe-Boi, S. Antonio do Prata (Hellmayr); numerous localities, Rio Guamá and Pará (Stone) to Rio Tocantins (Snethlage); Rio Xingú and elsewhere (Zimmer); Rio Capim, Rio Inhangapy (Stone)

5 ♂ 7 ♀, Pará, Bosque and Val-de-Caes

2 ♂, Rio Acará, Acará

10 ♂ 13 ♀, Benevides (Carnegie Mus.)

614. *PHLEGOPSIS NIGRO-MACULATA BOWMANI* Ridgway

Type locality: Diamantina, Santarem, Brazil

Santarem (Chapman and Riker); Rio Curuá, Rio Jamauchim, Rio Tapajoz (both banks) (Snethlage); Villa Bella Imperatriz and both banks of Rio Tapajoz (Zimmer)

6 ♂ 3 ♀, Rio Tapajoz, east bank

15 ♂ 9 ♀, Santarem (Carnegie Mus.)

9 ♂ 4 ♀, Rio Tapajoz, west bank (do.)

615. *PHLEGOPSIS NIGRO-MACULATA CONFINIS* Zimmer

Type locality: Tapará, Rio Xingú

Only known from the banks of the Rio Xingú (Zimmer)

Snethlage, 1926, comments on this subspecies on p. 55, and predicts that the bird between the Xingu and Rio Tocantins will prove separable.

616. *PHLEGOPSIS NIGRO-MACULATA PARAENSIS* Hellmayr

Type locality: Pará

Pará (Natterer, Wallace, Stone); Murutucu, Igarapé-Assu (Hellmayr); Rio Capim (Goeldi); Rio Guamá, vicinity of Pará and Rio Tocantins (Snethlage); Rio Guamá to Rio Tocantins (Zimmer); Murutucu (Pinto)

6 ♂ 6 ♀, Benevides (Carnegie Mus.)

617. *PHLEGOPSIS BORBAE* Hellmayr

Type locality: Borba, Rio Madeira

Villa Braga, left bank of Rio Tapajoz (Hellmayr), 1 ♂ ad. in Carnegie Museum, examined by us

618. MYRMORNIS TORQUATA (Boddaert)

Type locality: Cayenne

Peixe-Boi, Rio Tocantins, Cussary and Rio Tapajoz (Snethlage); Santarem (Allen); Aveiro (Pinto)

1 ♀, Rio Tapajoz, Caxiricatuba

2 ♂ 2 ♀, Obidos (Carnegie Mus.)

1 ♂ 1 ♀, Benevides (do.)

4 ♂ 4 ♀, Santarem (do.)

4 ♂ 4 ♀, Rio Tapajoz, both banks (do.)

619. MYRMOTHERA CAMPANISONA CAMPANISONA (Hermann)

Type locality: Cayenne

Obidos (Snethlage); Rio Jamundá, Faro (Zimmer)

1 ?, near Obidos

7 ♂ 4 ♀, Obidos (Carnegie Mus.)

620. MYRMOTHERA CAMPANISONA SUBCANESCENS Todd

Type locality: Colonia de Mojuy, Santarem, Rio Jamauchim (Snethlage); both banks of Rio Tapajoz (Todd); Aveiro (Pinto)

1 ♂ 6 ♀, Rio Tapajoz, east bank

13 ♂, 3 ♀, (do.), both banks (Carnegie Mus.)

6 ♂ 1 ♀, Santarem (do.)

621. GRALLARIA VARIA DISTINCTA Todd

Type locality: Villa Braga, Rio Tapajoz

1 ♂, Santarem

4 ♂, Rio Tapajoz, Villa Braga, Apacy, and Itaituba (Carnegie Mus.)

This rare bird is otherwise reported only from Calamá, Rio Madeira.

622. GRALLARIA BERLEPSCHI Hellmayr

Type locality: Engenho do Gama, western Matto Grosso

Cussary (Snethlage); Santarem (Todd, in Carnegie Museum)

2 ♂ 2 ♀, Rio Tapajoz, east bank

20 ♂ 5 ♀, Santarem

1 ♂, Rio Tapajoz, Miritituba (Carnegie Mus.)

623. GRALLARIA MACULARIA MACULARIA (Temminck)

Type locality: Cayenne

1 ♀, Obidos (Carnegie Mus.)

The first definite record for Brazil.

624. GRALLARIA MACULARIA PARAENSIS Snethlage

Type locality: Ourem, Rio Guamá, Pará, Brazil

Also from Rio Acará and Rio Jamauchim (Snethlage)

1 ♂, Miritituba, Rio Tapajoz (ex Carnegie Mus.)

3 ♂ 2 ♀, Santarem (Carnegie Mus.)

3 ♂, Rio Tapajoz, Miritituba and Villa Braga (do.)

The specimens from Villa Braga have distinct shaft streaks as in typical *macularia*.

Family CONOPOPHAGIDAE

625. CONOPOPHAGA AURITA AURITA (Gmelin)

Type locality: Cayenne

Rio Jamundá, Faro (Zimmer)

626. CONOPOPHAGA AURITA PALLIDA Snethlage

Type locality: Cametá, left bank of Rio Tocantins

Only the three original specimens are recorded.

627. CONOPOPHAGA AURITA SNETHLAGEÆ Berlepsch

Type locality: Tucunaré, Rio Jamauchim

Cussary and type locality (Snethlage); Rio Tapajoz, both banks (Zimmer, Pinto)

9 ♂, Rio Tapajoz, various localities, east bank

4 ♂ 2 ♀, Santarem (Carnegie Mus.)

12 ♂ 10 ♀, Rio Tapajoz, both banks (do.)

628. *CONOPOPHAGA MELANOGASTER* Ménériès

Type locality: Rio Maderia

Rio Tocantins and Rio Tapajoz, left bank (Snethlage)

1 ♂, Rio Tapajoz, Boim

1 ♂ 1 ♀, Rio Tapajoz, Villa Braga (ex Carnegie Mus.)

14 ♂ 6 ♀, Rio Tapajoz, Apaçy, Villa Braga, Itaituba (Carnegie Mus.)

629. *CONOPOPHAGA ROBERTI* Hellmayr

Type locality: Igarapé-Assu, Pará, Brazil

Peixe-Boi, Ipitinga, S. Antonio do Prata (Hellmayr); numerous localities near Pará to Rio Tocantins (Snethlage); Pará and Castanhal (Stone); Prata (Pinto)

1 ♂ 2 ♀, Pará, Bosque

2 ♂ 1 ♀, Rio Acará, Acará

9 ♂ 3 ♀, Benevides (Carnegie Mus.)

630. *CORYTHOPIS TORQUATA ANTHOIDES* (Pucheran)

Type locality: Cayenne

Pará (Wallace, Stone); Castanhal (Stone); Igarapé-Assu, S. Antonio do Prata (Hellmayr); Providencia, Ananindeua, Obidos (Snethlage)

1 ♀, Rio Acará, Acará

3 ♂, Rio Tapajoz, Pinhy, Caxiricatuba

9 ♂ 2 ♀, Obidos (Carnegie Mus.)

1 ♂, Benevides (do.)

2 ♂, Santarem (do.)

7 ♂ 2 ♀, Rio Tapajoz, both banks (do.)

Family RHINOCRYPTIDAE

631. *LIOSCELES THORACICUS THORACICUS* (Sclater)

Type locality: left bank of Rio Madeira

Villa Bella Imperatriz (Zimmer); Rio Tapajoz, Villa Braga (Snethlage)

1 ♂ 1 ♀, Villa Braga, left bank, Rio Tapajoz (ex Carnegie Museum)

13 ♂ 4 ♀, (do.) Carnegie Mus.)

This rare bird has only recently been found east of the Rio Madeira. Zimmer has shown that Peruvian records should be transferred to *erithacus*, leaving true *thoracicus* with an exceedingly restricted range.

Family COTINGIDAE

632. PHOENICIRCUS CARNIFEX (Linnæus)

Type locality: Surinam

Pará (Natterer, Wallace); Ipitinga (Hellmayr); Rio Guamá, Pará region and Rio Tocantins (Snethlage); Santarem and Villa Braga, Rio Tapajoz (Hellmayr, in Carnegie Museum)

2 ♂ 2 ♀, Rio Tapajoz, Caxiricatuba

1 ♀, Obidos (Carnegie Mus.)

1 ♀, Benevides (do.)

5 ♂ 4 ♀, Santarem (do.)

1 ♂ 1 ♀, Rio Tapajoz, Villa Braga (do.)

633. PHOENICIRCUS NIGRICOLLIS Swainson

Type locality: Barcellos, Rio Negro, Brazil

Villa Braga and Miritituba, Rio Tapajoz (Hellmayr) in Carnegie Museum;

1 ♂, 1 ♀, examined by us

2 ♀, Rio Tapajoz, Tauary and Caxiricatuba

These two species apparently occur together on the Rio Tapajoz, *carnifex* primarily northern and eastern, *nigricollis* upper Amazonian.

634. COTINGA COTINGA (Linnæus)

Type locality: "Brazil"

Pará (Natterer, Wallace); Providencia (Snethlage); Santarem (Chapman and Riker); series from vicinity of Pará in Museo Paulista (Cunha Vieiro)

635. COTINGA CAYANA (Linnæus)

Type locality: Cayenne

Pará (Natterer, Stone); Peixe-Boi and Ipitinga (Hellmayr); Rio Inhangapy (Stone); Pará region, Rio Acará, Rio Tocantins, Rio Tapajoz, (Snethlage); Santarem (Chapman and Riker)

1 ♂ 3 ♀, Obidos (Carnegie Mus.)

2 ♀, Benevides (do.)

636. XIPHOLENA PUNICEA (Pallas)

Type locality: Surinam

Rio Jamundá, Faro (Snethlage)

2 ♂, Obidos (Carnegie Mus.)

637. *XIPHOLENA LAMELLIPPENNIS LAMELLIPPENNIS* (Lafresnaye)

Type locality; Pará, by subsequent designation

Pará (Natterer, Wallace); Peixe-Boi, Ipitinga, Igarapé-Assu (Hellmayr);

Pinheiro (Stone); Pará region and Rio Tocantins (Snethlage)

4 ♂ 3 ♀, Pará, Val-de-Caes

4 ♂ 2 ♀, Benevides (Carnegie Mus.)

638. *XIPHOLENA LAMELLIPPENNIS PALLIDIOR* Griscom & Greenway

Rio Tapajoz, Boim (Snethlage)

4 ♂ 4 ♀, Rio Tapajoz, Pinhy, and Santarem

1 ♂, Santarem (Carnegie Mus.)

2 ♂ 1 ♀, Rio Tapajoz, both banks (do.)

The two species of the genus in our area have a somewhat unusual distribution, as *punicea* the "northern" one, crosses the Amazon west of our area and occurs along the Rio Madeira.

639. *IODOPLEURA ISABELLAE* PARZUDAKI

Type locality: Rio Nigro, "in Venezuela"

Pará (Layard); Marajo Island (Hellmayr); Providencia and Rio Tocantins (Snethlage); Pinheiro (Stone); Obidos and Murutucu (Cunha Vieiro)

2 ♂ 1 ♀ 1 ? , Benevides (Carnegie Mus.)

A little known bird, which reappears on the Rio Solimoës and Rio Purus, and thence extends to eastern Colombia, Ecuador, and Peru. Its relationship to other "species" in the genus still remains to be determined.

640. *ATTILA SPADICEUS SPADICEUS* (Gmelin)

Type locality: Cayenne

Benevides, Providencia, Rio Tocantins, Rio Tapajoz, Cussary, Monte Alegre, Obidos (Snethlage); Utinga (Beebe); Rio Tapajoz, numerous localities (Hellmayr, series in Carnegie Museum); Santarem (Ridgway; Chapman and Riker)

1 ♂, Pará, Bosque

2 ♂ 2 ♀, Rio Tapajoz, east bank

2 ♀, Benevides (Carnegie Mus.)

14 ♂ 8 ♀, Santarem (do.)

4 ♂ 2 ♀, Rio Tapajoz (do.)

641. *ATTILA BOLIVIANUS NATTERERI* Hellmayr

Type locality: Borba, Rio Madeira

Pará (Natterer); Monte Alegre and Rio Jamundá, Faro (Snethlage)

2 ♂ 1 ♀, near Obidos

10 ♂ 2 ♀, Obidos (Carnegie Mus.)

6 ♂ 6 ♀, Santarem (do.)

642. *ATTILA CINNAMOMEUS CINNAMOMEUS* (Gmelin)

Type locality: Cayenne

Ipitinga (Hellmayr); Pará (Layard); Mexiana Island (Spix); Rio Inhangapy (Stone); Amapá (Goeldi); Itaituba (Hellmayr); Pará region, Marajo Island, Cussary, Rio Tapajoz, Rio Jary, Arumanduba, Monte Alegre, Rio Jamundá (Snethlage); Caviana Island (Brodkorb)

1 ♂, Rio Tapajoz, Pinhy

2 ♂, Obidos (Carnegie Mus.)

3 ♂ 2 ♀, Santarem (do.)

3 ♂, Rio Tapajoz, left bank (do.)

643. *CASIORNIS RUFA* (Vieillot)

Type locality: Paraguay

Monte Alegre (Snethlage)

A campo species which is lacking in the Amazonian forests. Birds from this isolated locality on the north bank of the Amazon might prove separable.

644. *CASIORNIS FUSCA* Sclater and Salvin

Type locality: Bahia

Rio Muraitua (Stone); Pará, S. Antonio do Prata, Rio Tocantins, Rio Xingú, Rio Tapajoz (Snethlage)

1 ♀, Rio Tapajoz, Pinhy

1 ♂, Benevides (Carnegie Mus.)

1 ♂ 2 ♀, Santarem (do.)

645. LANIOCERA HYPOPYRRHA (Vieillot)

Type locality:

Peixe-Boi and S. Antonio do Prata (Hellmayr); Pará (Stone); Pará region, Rio Tocantins, Rio Tapajoz, Rio Jary, Obidos (Snethlage); large series from both banks of the Amazon (Zimmer)

3 ♂ 2 ♀, Rio Tapajoz, east bank

9 ♂, Obidos (Carnegie Mus.)

1 ♂, Benevides (do.)

3 ♂, Santarem (do.)

7 ♂, Rio Tapajoz, both banks (do.)

646. RHYTIPTERNA SIMPLEX FREDERICI (Bangs and Penard)

Type locality: Paramaribo, Surinam

Pará (Natterer); S. Antonio do Prata, Igarapé-Assu (Hellmayr); Santarem (Chapman and Riker; Hellmayr); Pará region, Rio Tocantins, Rio Tapajoz (Snethlage); Rio Jary, Obidos (Snethlage); Faro (Zimmer)

1 ♂, Pará, Bosque

1 ♂ 5 ♀, Rio Tapajoz, east bank

6 ♂ 3 ♀, Obidos (Carnegie Mus.)

2 ♀, Benevides (do.)

5 ♂ 6 ♀, Santarem (do.)

Our material brings out an interesting point in this connection. Mr. Zimmer has recently (1936) described the bird from the south bank as *intermedia* on very fine series. There would not appear, however, to be justifiable grounds for regarding our own as inadequate. Only four birds north of the Amazon out of thirty are appreciably paler and greyer, while only five from the south bank are noticeably yellower on the abdomen. Mr. Zimmer assigns all Amazonian birds to *intermedia*, but 12 specimens before us from the Rio Purus and Rio Solimoës appear instantly separable from Lower Amazon birds in being darker below. Thus we would not have described the birds from the south bank, and would most certainly have separated the others(!) were it not for the fact that Zimmer's material does not endorse it. If the two series were combined, the sensible course would probably be to follow Hellmayr in calling everything *frederici*.

647. RHYTIPTERNA IMMUNDA (Selater and Salvin)

Type locality: Oyapock, Cayenne, probably erroneous

1 ♂ from Santarem (Zimmer)

An exceedingly rare species, otherwise known from the Cassiquiare and the middle Rio Negro.

648. *LIPAUGUS CINERACEUS* (Vieillot)

Type locality: Cayenne

Numerous records throughout our area by all collectors

- 1 ♂, Rio Acará, Acará
- 18 ♂ 9 ♀, Rio Tapajoz, east bank
- 1 ♂ 1 ♀, Obidos (Carnegie Mus.)
- 2 ♂, Benevides(do.)
- 5 ♂ 2 ♀, Santarem (do.)

649. *PACHYRAMPHUS VIRIDIS GRISEIGULARIS* Salvin & Godman

Type locality: Mt. Roraima, British Guiana

Marajo Island (Snethlage, 1926)

- 1 ♂ 1 ♀, Rio Tapajoz, Pataua, June 26 and 27, ♂ breeding

This species is almost unknown from the lower Amazon. Our pair are strikingly different from typical *viridis*, but agree minutely with Hellmayr's comparative critique of *griseigularis*. Needless to say, further material from the Amazon is required to settle the status of the local form there.

650. *PACHYRAMPHUS SURINAMUS* (Linnæus)

Type locality: Surinam

Obidos (Hellmayr)

- 1 ♂, Obidos (Carnegie Mus.)

651. *PACHYRAMPHUS RUFUS* (Boddaert)

Type locality: Cayenne

Ubiquitous in our area, including Mexiana and Marajo Islands

- 2 ♂, near Obidos
- 4 ♂ 3 ♀, Rio Tapajos, east bank
- 2 ♂ 4 ♀, Obidos (Carnegie Mus.)
- 2 ♂ 3 ♀, Santarem (do.)
- 1 ♂ 2 ♀, Rio Tapajoz, left bank (do.)

652. *PACHYRAMPHUS CASTANEUS* subsp.

Rio Tocantins, Baiao, 1 ♂ (Zimmer)

- 1 ♂, Rio Tapajoz, Caxiricatuba

For the status of these two specimens cf. Zimmer, Amer. Mus. Novit., no. 894, 1936, p. 8.

653. *PACHYRAMPHUS CASTANEUS AMAZONUM* Zimmer

Type locality: Rosarinho, Rio Madeira, Brazil

Rio Jamundá, Faro, Obidos, Monte Alegre (Snethlage); Monte Alegre (Zimmer)

1 ♂, Obidos

17 ♂ 15 ♀, (do.) (Carnegie Mus.)

3 ♂ 2 ♀, Santarem (do.)

654. *PACHYRAMPHUS POLYCHOPTERUS TRISTIS* (Kaup)

Type locality: Cayenne

Mexiana Island (Sclater and Salvin); Marajo Island, and numerous localities north bank of Amazon from Obidos eastward (Snethlage and Zimmer)

2 ♂, near Obidos

6 ♂ 4 ♀, Obidos (Carnegie Mus.)

655. *PACHYRAMPHUS POLYCHOPTERUS NIGER* (Spix)

Type locality: Fonteboa, Amazonas

Villa Bella Imperatriz and Faro (Zimmer)

656. *PACHYRAMPHUS POLYCHOPTERUS POLYCHOPTERUS* (Vieillot)

Type locality: Bahia, Brazil

? Pará region (Sclater and Snethlage); Rio Tocantins (Snethlage and Zimmer) to the left bank of the Rio Tapajoz (Zimmer)

3 ♂ 4 ♀, Rio Tapajoz, east bank

1 ♀, Benevides (Carnegie Mus.)

9 ♂ 7 ♀, Santarem (do.)

An exceedingly variable series, one male from the Tapajoz very grey, others approaching *niger*, while most of the birds from the north bank are the blackest of all.(!) The three races listed here are a very unsatisfactory assemblage of variable intermediates in most of the range currently assigned to them, and are distinguishable only in very large series in the proportion of darker versus lighter birds.

657. *PACHYRAMPHUS MARGINATUS NANUS* Bangs and Penard

Type locality: Xeberos, Peruvian Amazon

Santarem (Chapman and Riker); Pará (Stone); Utinga (Beebe); numerous localities Rio Guamá, Pará region and all rivers on the south bank to the Rio Tapajoz, and various north bank localities (Snethlage)

1 ♀, Rio Tapajoz, Santarem

7 ♂ 9 ♀, Obidos (Carnegie Mus.)

1 ♂ 2 ♀, Benevides (do.)

2 ♂ 5 ♀, Santarem (do.)

12 ♂ 11 ♀, Rio Tapajoz, both banks (do.)

658. *PLATYPSARIS RUFUS RUFUS* (Vieillot)

Type locality: Paraguay

Mocajuba, Rio Tocantins; Pará and Marajo Island (Zimmer)

The last two birds originally recorded by Snethlage as *minor*.

659. *PLATYPSARIS MINOR* (Lesson)

Type locality: Cayenne

Pará (Natterer, and Stone); Santarem (Chapman and Riker); Ipitinga (Hellmayr); Pará region, Rio Tocantins and Rio Tapajoz (Snethlage); Obidos, Rio Tapajoz and Santarem (Hellmayr)

1 ♂ 1 ♀, Obidos (Carnegie Mus.)

6 ♂ 4 ♀, Santarem (do.)

1 ♀, Rio Tapajoz, Villa Braga (do.)

660. *TITYRA CAYANA CAYANA* (Linnæus)

Type locality: Cayenne

Pará (Natterer, Wallace, Stone); Peixe-Boi, Ipitinga, S. Antonio do Prata, Igarapé-Assu (Hellmayr); Santarem (Chapman and Riker); Pará region, Rio Tocantins, and north bank localities (Snethlage); Marajo Island (Brodkorb)

1 ♀, Rio Acará, Acará

3 ♂ 3 ♀, Obidos (Carnegie Mus.)

1 ♀, Benevides (do.)

2 ♂, Santarem (do.)

661. *TITYRA SEMIFASCIATA SEMIFASCIATA* (Spix)

Type locality: Pará

Pará (Spix, Cabanis); Mexiana Island (Hagmann); Rio Muria (Natterer); Marajo Island, Rio Tocantins to Rio Tapajoz, and north bank localities (Snethlage); numerous localities throughout (Zimmer)

1 ♀, Rio Tapajoz, Tauary

2 ♂ 2 ♀, Obidos (Carnegie Mus.)

4 ♂ 1 ♀, Rio Tapajoz, both banks (do.)

11 ♂ 8 ♀, Santarem (do.)

It still remains to be determined how these two species divide the territory between them in places where they are both recorded.

662. *TITYRA INQUISITOR PELZELNI* Salvin and Godman

Type locality: Matto Grosso, Brazil

Peixe-Boi, S. Antonio do Prata (Hellmayr); Santarem (Chapman and Riker, Zimmer); Utinga (Beebe); Villa Bella Imperatriz (Zimmer)

1 ♀, Santarem (Carnegie Mus.)

663. *TITYRA INQUISITOR ERYTHROGENYS* (Selby)

Type locality: corrected to Cayenne

Rio Jamundá, Faro (Snethlage and Zimmer)

This rare species has undoubtedly been overlooked in our area. The species should be sought on the left bank of the Rio Tapajoz, and such specimens might assist in solving the status of the unique *T. leucura* Pelzeln from the upper Rio Madeira, the characters of which suggest individual aberration. The greyer breast and upper parts, however, suggest the possibility of a local subspecies.

664. *HAEMATODERUS MILITARIS* (Shaw)

Type locality: Cayenne

Cametá, Rio Tocantins (Selater and Salvin); Pará (Natterer); Igarapé-Assu (Hellmayr)

2 ♂ 2 ♀, Obidos (Carnegie Mus.)

An exceedingly rare bird, particularly in our area. It remains to be determined whether Amazonian specimens are the same as Guianian.

665. *QUERULA PURPURATA* (Müller)

Type locality: Cayenne

Ipitinga (Hellmayr); Rio Capim (Goeldi); Pará (Descourtilz, Natterer); Santarem (Chapman and Riker, Ihering); Castanhal (Stone); Rio Guamá, Pará region, Cussary (Snethlage)

2 ♂ 2 ♀, Pará, Bosque, and Val-de-Caes

1 ♂ 2 ♀, Rio Acará, Acará

1 ♂, Obidos (Carnegie Mus.)

3 ♂ 3 ♀, Benevides (do.)

2 ♂ 1 ♀, Santarem (do.)

666. *PERISSCOEPHALUS TRICOLOR* (Müller)

Type locality: Cayenne

Rio Jary, Monte Alegre (Snethlage)

3 ♂ 1 ♀, Obidos (Carnegie Mus.)

667. *GYMNODERUS FOETIDUS* (Linnæus)

Type locality: Surinam

Santarem (Chapman); Mexiana Island (Hagmann); Caviana Island (Brod-korb); Pará, Quati-puru, Monte Alegre (Snethlage)

1 ♀, Rio Tapajoz, Tauary

1 ♂ 2 ♀, Santarem (Carnegie Mus.)

1 ♀, Rio Tapajoz, Apaçy (do.)

Family PIPRIDAE

668. *PIPRITES CHLORIS CHLORION* (Cabanis)

Type locality: Cayenne

Utinga (Beebe); Quati-puru, Rio Guamá, Cussary, Rio Tapajoz, Rio Jary (Snethlage)

1 ♂ 1 ♀, Rio Tapajoz, Tauary

8 ♂ 2 ♀, Obidos (Carnegie Mus.)

1 ♂ 1 ♀, Santarem (do.)

3 ♂ 1 ♀, Rio Tapajoz, Miritituba (do.)

1 ♂, Rio Tapajoz, Villa Braga (do.)

Still a rare bird in most collections, and Madame Snethlage reported a total of 7 specimens only from 7 localities. The species ranges widely, but is apparently unrecorded in much of upper Amazonia as yet.

669. *PIPRA AUREOLA AUREOLA* (Linnæus)

Type locality: Surinam

Mexiana Island (Hellmayr); Caviana Island (Brodkorb); Marajo Island, Rio Moju, Maracá, Rio Jary, Arumanduba (?), Monte Alegre (?), Rio Maccuru (?), (Snethlage); Pará to Rio Xingú and Rio Jary (Zimmer)

670. *PIPRA AUREOLA FLAVICOLLIS* Sclater

Type locality: Manaus

Obidos and Rio Jamundá, Faro (Snethlage); Faro, Monte Alegre and Villa Bella Imperatriz (Zimmer)

2 ♂, near Obidos

5 ♂ 2 ♀, Obidos (Carnegie Mus.)

671. *PIPRA AUREOLA AURANTICOLLIS* Todd

Type locality: Santarem

Santarem (Chapman and Riker); Cussary, Tamucury (Snethlage); Rio Tapajoz, Santarem, Tamucury (Zimmer)

15 ♂ 7 ♀, Santarem (Carnegie Mus.)

The races of this species have a somewhat peculiar and unusual distribution in our area. The race *flavicollis* crosses the Amazon westward and occurs on the Rio Madeira. On the other hand, typical *aureola* occurs on the north bank and also the extreme eastern section on the south bank of the Amazon. Between this region and the Rio Madeira, the species is rare and local.

672. *PIPRA FASCHICAUDA SCARLATINA* Hellmayr

Type locality: São Paulo, Brazil

Rio Tocantins (Wallace, Snethlage and Zimmer); Itaituba, Rio Tapajoz (Hellmayr and Zimmer); Tapajoz, Jamauchim and Curuá rivers (Snethlage)

5 ♂ 4 ♀, Rio Tapajoz, both banks (Carnegie Mus.)

This species, closely related to the last and equally variable, is at the extreme northern limit of its range on the south bank of the Amazon, where it is apparently commoner than the last.

673. *PIPRA ANOMALA* Todd

Type locality: Santarem, Rio Tapajoz

This type is to date the only recorded specimen, and has been examined by us.

674. *PIPRA IRIS IRIS* Schinz

Type locality: Pará, by subsequent designation

Ourem, Benevides, Igarapé-Assu, S. Antonio do Prata, Peixe-Boi (Hellmayr); Utinga, Santa Isabel and Castanhal (Stone); numerous localities near and east of Pará (Snethlage)

13 ♂ 4 ♀, Benevides (Carnegie Mus.)

675. *PIPRA IRIS EUCEPHALA* Todd

Type locality: Miritituba, Rio Tapajoz

Santarem, Colonia do Mojuy (Todd)

2 ♂ 1 ♀, Rio Tapajoz, east bank

2 ♂ 2 ♀, (do.), Miritituba (Carnegie Mus.)

1 ♂ 3 ♀, Santarem (do.)

676. *PIPRA NATTERERI* Sclater

Type locality: Borba, Rio Madeira

Left bank of Rio Tapajoz, Boim and Villa Braga (Snethlage)

26 ♂ 24 ♀, Rio Tapajoz, Villa Braga, (Carnegie Mus.)

Snethlage also records this species from the Rio Jamauchim, but the specimen is probably *iris eucephala*. These two species may prove to be conspecific.

677. *PIPRA ERYTHROCEPHALA ERYTHROCEPHALA* (Linnæus)

Type locality: Surinam

Obidos (Hellmayr); north bank of Amazon, Rio Jary to Rio Jamundá (Snethlage)

1 ♂ 2 ♀, Obidos (Carnegie Mus.)

678. *PIPRA ERYTHROCEPHALA RUBROCAPILLA* Temminck

Type locality: Bahia

Bemfica, Marco de Legua, Nazaré, Rio Capim, Peixe-Boi, Ipitinga, S. Antonio do Prata (Hellmayr); Utinga (Beebe); various localities near Pará (Stone); throughout from Pará to left bank of Rio Tapajoz (Snethlage); Santarem (Chapman and Riker)

6 ♂, Pará, Bosque

2 ♂, Rio Acará, Acará

26 ♂ 16 ♀, Rio Tapajoz, east bank

16 ♂ 7 ♀, Benevides (Carnegie Mus.)

9 ♂ 6 ♀, Santarem (do.)

24 ♂ 11 ♀, Rio Tapajoz (both banks) (do.)

679. *PIPRA PIPRA PIPRA* (Linnæus)

Type locality: Surinam

Rio Jary, Obidos, Rio Jamundá (Snethlage); Faro (Zimmer)

2 ♂, Obidos (Carnegie Mus.)

680. *PIPRA PIPRA SEPARABILIS* Zimmer

Type locality: Tapará, Rio Xingú, Brazil

Pará (Wallace, Layard); Benevides, Maguary, S. Antonio do Prata, Igarapé-Assu, Peixe-Boi, Ipitinga (Hellmayr); Rio Capim (Goeldi); Ipitinga (Beebe); Castanhal (Stone); Pará region and Rio Tocantins (Snethlage); numerous localities, Pará to Rio Tapajoz (Zimmer)

4 ♂ 2 ♀, Pará, Bosque

2 ♂ 1 ♀, Rio Acará, Acará

4 ♂ 5 ♀, Benevides (Carnegie Mus.)

681. *MACHAEROPTERUS PYROCEPHALUS PYROCEPHALUS* (Sclater)

Type locality: probably eastern Peru; Ucayali, Upper Amazons by Berlepsch and Hartert.

Boim, Rio Tapajoz (Snethlage and Zimmer)

4 ♂ 3 ♀, Rio Tapajoz, Santarem, Tauary & Caxiricatuba

31 ♂ 11 ♀, Santarem (Carnegie Mus.)

5 ♂ 1 ♀, Rio Tapajoz, Apaçy (do.)

A rare species with a scattered distribution, suggesting that it still remains to be discovered in intervening areas.

682. *CERATOPIPRA CORNUTA* (Spix)

Type locality: forests of Amazon River

Obidos (Bates)

683. *TYRANNEUTES VIRESCENS* (Pelzeln)

Type locality: Manaos, Brazil

Obidos, Rio Jamundá (Snethlage)

27 ♂ 7 ♀, Obidos (Carnegie Mus.)

684. *TYRANNEUTES STOLZMANNI* (Hellmayr)

Type locality: Marabitanas, Rio Negro

Peixe-Boi (Hellmayr); Castanhal (Stone); Pará, Providencia, Ananindeua, Rio Tocantins, Cussary, Rio Jamauchim, and Rio Tapajoz (Snethlage)

- 1 ♂, Pará, Bosque
- 15 ♂ 1 ♀, Rio Tapajoz, various localities east bank.
- 6 ♂ 2 ♀, Benevides (Carnegie Mus.)
- 13 ♂ 7 ♀, Santarem (do.)
- 2 ♂ 1 ♀ 1 ?, Rio Tapajoz (do.)

685. *CHIROXIPHIA PAREOLA PAREOLA* (Linnæus)

Type locality: Brazil and Cayenne

Pará, S. Antonio do Prata, Ipitinga (Hellmayr); Santarem (Chapman and Riker); Obidos (Hellmayr); Capim and Inhangapy (Stone); large series, Pará to right bank of the Tapajoz, Marajo Island, Monte Alegre (Snethlage)

- 1 ♂, Rio Acará, Acará
- 39 ♂ 15 ♀, Rio Tapajoz, various localities, east bank.
- 1 ♂, Obidos (Carnegie Mus.)
- 6 ♂ 1 ♀, Benevides (do.)
- 8 ♂ 3 ♀, Santarem (do.)
- 1 ♂ 1 ♀, Rio Tapajoz, Aveiros (do.)

686. *CHIROXIPHIA PAREOLA REGINA* Sclater

Type locality: Borba, Rio Madeira

West bank of Rio Tapajoz, Boim and Villa Braga (Snethlage and Hellmayr)

- 4 ♂ 6 ♀, Rio Tapajoz, Villa Braga (Carnegie Mus.)

687. *MANACUS MANACUS MANACUS* (Linnæus)

Type locality: Surinam

Monte Alegre, Obidos, Rio Jamundá (Snethlage); Faro and Monte Alegre (Zimmer)

- 1 ♂ 2 ♀, Obidos (Carnegie Mus.)

688. *MANACUS MANACUS PURISSIMUS* Todd

Type locality: Benevides, Pará, Brazil

Numerous records by all collectors from the Pará region to the right bank of the Rio Tocantins (Baiao, fide Zimmer)

- 3 ♂ 1 ♀, Pará, Val-de-Caes
- 1 ♂ 1 ♀, Rio Acará, Acará
- 9 ♂ 4 ♀, Benevides (Carnegie Mus.)

689. *MANACUS MANACUS LONGIBARBATUS* Zimmer

Type locality: Tapará, Rio Xingú, Brazil

Right bank of the Rio Xingú, and apparently also "Baião", Rio Tocantins, fide Zimmer

690. *MANACUS MANACUS PURUS* Bangs

Type locality: Santarem, Rio Tapajoz

Numerous records by all collectors from the right bank of the Rio Tapajoz to Villa Bella Imperatriz, and the right bank of the Rio Madeira

7 ♂ 7 ♀, Rio Tapajoz, east bank

2 ♂ 7 ♀, Santarem (Carnegie Mus.)

3 ♂ 2 ♀, Rio Tapajoz (do.)

691. *NEOPIPO CINNAMOMEA CINNAMOMEA* (Lawrence)

Type locality: "Upper Amazon"

1 ♂, Rio Tapajoz, Villa Braga (Carnegie Mus.)

Previously unrecorded east of the left bank of the Rio Madeira

692. *SCHIFFORNIS MAJOR* Des Murs

Type locality: Sarayacu, Peru

Santarem (Hellmayr); Rio Jamundá, Faro (Snethlage)

1 ♂, Santarem

3 ♂, Obidos (Carnegie Mus.)

4 ♂ 2 ♀, Santarem (do.)

We prefer Zimmer's more conservative course in not recognizing the genus *Massornis*.

693. *SCHIFFORNIS TURDINUS WALLACII* (Sclater and Salvin)

Type locality: Pará

Pará (Wallace, Stone); S. Antonio do Prata (Hellmayr); Pará to Rio Xingú on south bank, and north bank, Rio Jary to Rio Jamundá (Snethlage); numerous localities throughout (Zimmer)

2 ♂, Pará, Bosque

4 ♂ 2 ♀, Rio Tapajoz, various localities, east bank

3 ♂, Obidos (Carnegie Mus.)

6 ♂ 3 ♀, Benevides (do.)

8 ♂ 3 ♀, Santarem (do.)

4 ♂ 3 ♀, Rio Tapajoz, east bank (do.)

694. SCHIFFORNIS TURDINUS AMAZONUS (Sclater)

Type locality: Chamicuros, Peru

6 ♂ 2 ♀, Rio Tapajoz, Villa Braga

The material in the Carnegie Museum makes it clear that a final revision of the racial variation of this difficult species in upper Amazonian Brazil must be postponed until someone can assemble material from the entire area, without having to guess about the characters of series in other institutions. Mr. Zimmer's recent revision (Amer. Mus. Novit., no. 899, 1936, pp. 21-24) is, of course, quite the most authoritative, but he lacked Brazilian material west of the Rio Madeira. Mr. Todd's *intercedens* was based on a comparison of his Purus series with birds from east Ecuador, at that time passing as *amazonus*. Hellmayr guessed shrewdly and Zimmer proved that *intercedens* Todd = *amazonus* Sclater, and east Ecuador birds are a new race *aeneus* Zimmer. Seventeen specimens from the Rio Purus before us, presumably, therefore, representing *amazonus*, are strikingly distinct from *wallacii* in just the characters ascribed. On the right bank of the Tapajoz, occasional specimens show an approach to *amazonus*, but the series before us from the left bank (Villa Braga) is clearly inseparable from the Rio Purus series. We differ from Zimmer only in extending the range of *amazonus* eastward to the left bank of the Tapajoz. Mr. Zimmer has already commented that birds seen by him from the Rio Madeira "strongly suggest *amazonus*."

695. NEOPELMA PALLESCENS (Lafresnaye)

Type locality: Bahia

Rio Tapajoz, Santarem and Itaituba (Hellmayr); Serra de Paituna on north bank (Snethlage)

5 ♂ 1 ♀, Rio Tapajoz, Santarem

12 ♂ 2 ♀, Santarem (Carnegie Mus.)

The four species of *Neopelma* have a general range in eastern South America from the Guianas to southeastern Brazil. It is noteworthy that only one occurs rarely and locally in the lower Amazon, and on both banks at that. We have here an excellent illustration of a group whose range must have become disrupted by the Amazonian sea, and where the former gap in this range has not yet been filled in.

696. *HETEROCERCUS LINTEATUS* (Strickland)

Type locality: upper branches of Amazon River

Santarem (Chapman and Riker); Rio Iriri, Rio Jamauchim and Rio Tapajoz (Snethlage); various localities Rio Tapajoz (Zimmer)

14 ♂ 15 ♀, Rio Tapajoz, east bank

1 ♀, Santarem (Carnegie Mus.)

19 ♂ 5 ♀, Rio Tapajoz, both banks (do.)

697. *HETEROCERCUS FLAVIVERTEX* Pelzeln

Type locality: Marabitanas, Rio Negro

Rio Jamundá, Faro (Zimmer)

Snethlage records *H. linteatus* from Monte Alegre on the north bank of the Amazon. Either this locality is erroneous, or the specimen is *flavivertex*.

Family TYRANNIDAE

698. *XOLMIS CINEREA* (Vieillot)

Type locality: South America

Marajo Island (Allen and Snethlage); Caviana Island (Brodkorb); Rio Iriri (Snethlage)

A well known campos species, here at its northern limit.

699. *XOLMIS VELATA* (Lichtenstein)

Type locality: São Paulo, Brazil

Mexiana Island (Wallace, Hagmann); Marajo Island (Allen, Hellmayr); Ereré, Rio Maeuru (Snethlage)

3 ♂ 1 ♀, South bank of Amazon, Lago Grande

This species is also at its extreme northern limit in our area, occurring only in unforested localities.

700. *COLONIA COLONUS COLONUS* (Vieillot)

Type locality: Paraguay

1 ♂, Arary, Marajo Island (Brodkorb, 1937)

It is certainly remarkable that the only Amazonian specimen of this genus, although collected in 1871, was not recorded until 1937. The subspecies must be regarded as tentative only. The typical race is not otherwise known north of Maranhao (Zimmer, 1937), while *pocilonota* (Cabanis) is not reported outside of the Guianas.

701. *KNIPOLEGUS ORENOCENSIS XINGUENSIS* Berlepsch

Type locality: Santa Julia, Rio Iriri, Rio Xingu

This species, apparently strictly riparian, is still rare in collections. The race *xinguensis* is still known only from the type collection, and two males from the Rio Araguaya, Goyaz, which Hellmayr refers here provisionally.

702. *KNIPOLEGUS ORENOCENSIS SCLATERI* Hellmayr

Type locality: Rio Madeira

2 ♂ imm., 2 ♀, Rio Tapajoz, Pinhy and Caxiricatuba

An equally rare bird, so far reported only from the type locality and Pebas, Peru. Our specimens are so dark and brown, that they cannot possibly be referred to *xinguensis*.

703. *PHAEOTRICCUS PÆCILOCERCUS* (Pelzeln)

Type locality: Rio Amajau, Rio Negro

"Lower Amazon" (type of *Cnipolegus pusillus* in Brit. Mus.); Rio Tapajoz, Itaituba (Hellmayr); Rio Jamundá, Faro, Cussary, Monte Alegre, Rio Iriri, Rio Tocantins (Snethlage); numerous localities east to the Tocantins (Zimmer, 1937)

3 ♂ 1 ♀, Rio Tapajoz, west bank, Pinhel

4 ♂ ad. 1 ♂ imm., Rio Tapajoz, east bank, Pinhy and Caxiricatuba.

Another strictly riparian species, apparently much commoner than the *Cnipolegus*. Both are recorded from the Orinoco as well as the Amazon.

704. *FLUVICOLA PICA ALBIVENTER* (Spix)

Type locality: "Brazil"

Mexiana Island (Wallace); Marajo Island (Snethlage); Caviana Island (Brodkorb); Monte Alegre, Arumanduba, Rio Maecuru, Rio Iriri, Rio Tapajoz (Snethlage); Santarem (Chapman and Riker)

4 ♂ 2 ♀, north bank of Amazon near Obidos

4 ♂ 1 ♀, Obidos (Carnegie Mus.)

2 ♂ 1 ♀, Santarem (do.)

705. ARUNDINICOLA LEUCOCEPHALA (Linnæus)

Type locality: Surinam

Mexiana Island (Hagmann); Marajo Island (Hellmayr); Caviana Island (Brodkorb); Peixe-Boi, Quati-puru, Arumanduba, Monte Alegre, Cussary, (Snethlage); Santarem (Chapman and Riker)

3 ♂, north bank of Amazon near Obidos

3 ♂ 2 ♀, Obidos (Carnegie Mus.)

2 ♂ 2 ♀, Santarem (do.)

706. PYROCEPHALUS RUBINUS RUBINUS (Boddaert)

Type locality: "Amazon River"; see Brodkorb, 1937

Monte Alegre, Rio Xingú, Rio Iriri, Rio Curua (Snethlage)

1 ♂ 1 ♀, Santarem (Carnegie Mus.)

So far as we can see, typical *rubinus*, as currently restricted, still requires further study accurately to delimit its range. Brodkorb's work is certainly a step in the right direction.

707. OCHTHORNIS LITTORALIS (Pelzeln)

Type locality: Cachoeira, Rio Mamoré, Rio Madeira; Rio Jamauchim (Snethlage)

1 ♀, Obidos (Carnegie Mus.)

2 ♂ 1 ♀, Rio Tapajoz, Villa Braga (do.)

An upper Amazonian genus, only once reported east of the Rio Madeira.

708. MUSCIVORA TYRANNUS TYRANNUS (Linnæus)

Type locality: Surinam

Pará region, Marajo and Mexiana Islands (numerous collectors); Caviana Island (Brodkorb); Monte Alegre and Rio Jamundá, Faro (Snethlage); Rio Tapajoz (various collectors); always reported as common where found. Pará, Rio Tapajoz, various localities, and Villa Bella Imperatriz, 15 specimens definitely this subspecies (Zimmer)

Zimmer's monographic study of this species (Amer. Mus. Novit. no. 962, Nov. 1937) proves that typical *tyrannus* is migratory, and occurs in our area from February to November. It is of course impossible to allocate the old records for the species in lower Amazonia, which are all given above.

709. *MUSCIVORA TYRANNUS CIRCUMDATUS* Zimmer, 1937

Type locality: Tauary, Rio Tapajoz, Brazil

Apparently resident on the south bank of the Amazon from Villa Bella Imperatriz to the right bank of the Tapajoz (Zimmer)

13 ♂ 4 ♀, Rio Tapajoz, various localities east bank (M.C.Z.)

710. *TYRANNUS ALBOGULARIS* Burmeister

Type locality: near Bahia and Pernambuco

Monte Alegre, 1 ♂ Aug. 9, 1908 (Snethlage); Santarem 1 ♂, July 25, 1883, (Chapman and Riker); Santarem, Rio Tapajoz and Villa Bella Imperatriz, 11 specimens, no dates (Zimmer)

1 ♂, south bank of Amazon, Lago Grande, Sept. 5

2 ♂ 1 ♀, Santarem, June 13, July 29, 1919 (Carnegie Mus.)

A characteristic campo bird of the interior of Brazil, apparently rare in our area. The recorded dates of capture of the known specimens, and the fact that Hellmayr has examined the bird from the north bank and found it identical with Matto Grosso specimens, raises the presumption that the species is partly migratory, and may occur in our area as a winter visitant only.

711. *TYRANNUS MELANCHOLICUS MELANCHOLICUS* Vieillot

Type locality: Paraguay.

Villa Bella Imperatriz (Zimmer)

This Kingbird is at least partly migratory, and most of the birds from the south bank of the Amazon are unsatisfactory intermediates (cf. Zimmer, Amer. Mus. Novit. no. 962).

712. *TYRANNUS MELANCHOLICUS DESPOTES* (Lichtenstein)

Type locality: Bahia

Common throughout the area (all collectors)

1 ♂ 1 ♀, Para, Bosque

23 ♂ 6 ♀, Rio Tapajoz, various localities, east bank

1 ♂ 1 ♀, Obidos (Carnegie Mus.)

1 ♂ 2 ♀, Benevides (do.)

3 ♂ 2 ♀, Santarem (do.)

2 ♀, Rio Tapajoz, both banks (do.)

713. *EMPIDONOMUS VARIUS VARIUS* (Vieillot)

Type locality: Paraguay

Rio Tapajoz, Aramanay and Igarape Brabo, probably migrants (Zimmer, 1937)

714. *EMPIDONOMUS VARIUS RUFINUS* (Spix)

Type locality: Amazon River

Common throughout the area, but unrecorded from Marajo and Mexiana Islands

2 ♂, Pará, Val-de-Caes

15 ♂ 3 ♀, 1 ?, Rio Tapajoz, east bank

3 ♂ 2 ♀, Benevides (Carnegie Mus.)

9 ♂ 5 ♀, Santarem (do.)

2 ♂ 1 ♀, Rio Tapajoz, both banks (do.)

715. *EMPIDONOMUS AURANTIO-ATRO-CRISTATUS MINOR* (Hellmayr)

Type locality: São Luiz, Maranhao, Brazil

Santarem 1 ♂, (Snethlage); Santarem 2 ♂, (Zimmer)

6 ♂ 5 ♀, Rio Tapajoz, various localities, east bank

4 ♂ 1 ♀, Santarem (Carnegie Mus.)

This species illustrates how spotty our knowledge is of the status of many Amazonian birds. The good series collected by the Olallas could not have been predicted by the previous absence of records. There is apparently no reason why it should not occur in other parts of our area, and it is possibly a winter visitant only.

716. *LEGATUS LEUCOPHAIUS LEUCOPHAIUS* (Vieillot)

Type locality: Cayenne

Pará region (common); Marajo Island (Snethlage); Rio Tapajoz region (common); Obidos (Snethlage)

2 ♂, Pará, Bosque and Val-de-Caes

14 ♂ 3 ♀, Rio Tapajoz, Tauary and Pinhy

2 ♂, Obidos (Carnegie Mus.)

2 ♂ 1 ♀, Benevides (do.)

4 ♂, Santarem (do.)

As is usual in a good series in this species, one or two are notably larger than all the others.

717. *SIRYSTES SIBILATOR SUBCANESCENS* Todd

Type locality: upper Rocaná, northern Pará, Brazil

Rio Jamundá, Faro, 1 ♀, (Snethlage); Rio Tocantins, Baião and Pedregal, and Rio Tapajoz, Limoal (Zimmer)

2 ♂ 4 ♀, Obidos (Carnegie Mus.)

The type locality is only a few miles from the French Guiana border. Birds from the south bank of the Amazon might well be another subspecies, as Zimmer had no authentic specimens of *subcanescens*. This widely diffused and variable species is very rare in all parts of its range, except for the typical form in southeastern Brazil.

718. *MYIODYNASTES MACULATUS MACULATUS* (Müller)

Type locality: Cayenne

Cajutuba (Natterer); Mexiana Island (Hagmann); Caviana Island (Brod-korb); various north bank localities (Snethlage); Monte Alegre, Faro, and Villa Bella Imperatriz, (Zimmer)

1 ♂, Lago Jauary near Obidos

1 ♂ 2 ♀, Obidos (Carnegie Mus.)

2 ♂ 1 ♀, Santarem (do.)

The apparent absence of this species from most of the south bank of the Amazon is noteworthy.

719. *MYIODYNASTES MACULATUS SOLITARIUS* (Vieillot)

Type locality: Paraguay

Pará region (all authors); Rio Tocantins (Snethlage); Santarem (Chapman and Riker, Snethlage); Pará to Rio Tapajoz (Zimmer)

4 ♂ 10 ♀, 1 ? Rio Tapajoz, various localities, east bank.

1 ♀, Obidos (Carnegie Mus.)

5 ♂ 2 ♀, Santarem (do.)

Apparently a winter visitor only in our area. Zimmer reports intermediates from the Rio Xingú.

720. *MEGARYNCHUS PITANGUA PITANGUA* (Linnæus)

Type locality: eastern Brazil

Mexiana Island (Wallace); Rio Tocantins (Snethlage); Santarem (Chapman and Riker); Cussary, Rio Tapajoz, Rio Jamundá (Snethlage)

1 ♂ 1 ♀, near Obidos

4 ♂ 2 ♀ 1 ? , Rio Tapajoz, various localities, east bank

2 ♂ 1 ♀, Obidos (Carnegie Mus.)

5 ♂ 2 ♀, Santarem (do.)

1 ♂ 3 ♀, Rio Tapajoz, left bank (do.)

721. *CONOPIAS TRIVIRGATA BERLEPSCHI* Snethlage

Type locality: Rio Jamundá, Faro, 3 ♂

Faro, Rio Tapajoz, Caxiricatuba, Tauary, Igarapé Amarin (Zimmer)

1 ♂ 1 ♀, Boca do Igarapé-Piaba, near Obidos, March, 1933.

1 ♀, Rio Tapajoz, Pinhy, June 30, 1930

2 ♂ 1 ♀, islands near Obidos (Carnegie Mus.)

3 ♂, Obidos (do.)

5 ♂ 1 ♀, Santarem (do.)

3 ♂ 2 ♀, Rio Tapajoz, left bank (do.)

Obviously more widely ranging and less rare than formerly supposed.

722. *CORYPHOTRICCUS PARVUS PARVUS* (Pelzeln)

Type locality: Marabitanas, Rio Negro

5 ♂ 2 ♀, Obidos (Carnegie Mus.)

The first record for this rare genus in Amazonia.

723. *MYIOZETETES CAYANENSIS CAYANENSIS* (Linnæus)

Type locality: Cayenne

Pará region (abundant); Mexiana Island (Hellmayr); Santarem (Chapman and Riker); Rio Mojú, Arumanduba (Snethlage)

2 ♂ 3 ♀, Pará, Bosque

13 ♂ 8 ♀, Rio Tapajoz, various localities

1 ♂ 2 ♀, Obidos (Carnegie Mus.)

1 ♂, Benevides (do.)

1 ♂ 2 ♀, Rio Tapajoz, both banks (do.)

724. MYIOZETETES SIMILIS SIMILIS (Spix)

Type locality: Amazon River; Rio Madeira as restricted by Zimmer.

Pará (Layard, Hellmayr); north shore of Amazon to Rio Jamundá (Snethlage);

Villa Bella Imperatriz and Rio Tapajoz, Igarape Brabo (Zimmer)

1 ♂, Rio Tapajoz, Santarem

1 ♀, near Obidos

11 ♂ 5 ♀, Obidos (Carnegie Mus.)

8 ♂ 4 ♀, Santarem (do.)

Pará records may prove to be *pallidiventris* Pinto.

725. TYRANNOPSIS SULPHUREA (Spix)

Type locality: Brazil

Rio Muria (Natterer); Rio Inhangapy (Stone); Santarem (Chapman and Riker); Pará, Marajo Island, Amapá (Snethlage)

3 ♂, Rio Acará, Acará

2 ♂ 3 ♀, Santarem (Carnegie Mus.)

726. PITANGUS SULPHURATUS SULPHURATUS (Linnæus)

Type locality: Cayenne

Abundant throughout the area (all collectors)

3 ♂ 2 ♀, Pará, Val-de-Caes

14 ♂ 12 ♀, Rio Tapajoz, various localities, east bank.

1 ♀, Obidos (Carnegie Mus.)

1 ♂, Benevides (do.)

1 ♂, Santarem (do.)

2 ♂, Rio Tapajoz, left bank (do.)

While Hellmayr claims that *maximiliani* is a very unsatisfactory race, the ample material in the Museum of Comparative Zoology does not endorse this characterization. It is true that the average color differences are relatively slight, but there is a marked difference in wing length. In this respect our Amazonian series agrees with Cayenne material, the wings of all combined being nearly an inch shorter on the average than Bahia examples of *maximiliani*. We consequently quite definitely refer Pará birds to *sulphuratus*, and do not at all subscribe to Hellmayr's statement that they "might as well be referred to one race as the other".

727. PITANGUS LICTOR LICTOR (Lichtenstein)

Type locality: Pará

Common, and recorded throughout our area

2 ♂ 3 ♀, near Obidos

5 ♂ 3 ♀ 2 juv., Rio Tapajoz, various localities, east bank

2 ♂, Obidos (Carnegie Mus.)

5 ♂ 4 ♀, Santarem (do.)

1 ♂ 1 ♀, Rio Tapajoz, both banks (do.)

728. MYARCHUS TYRANNULUS BAHIAE Berlepsch and Leverkühn

Type locality: Bahia

Rio Muria (Natterer); Santarem (Chapman and Riker); Monte Alegre (Snethlage); numerous localities in lower Amazonia (Todd); Rio Xingú, Rio Tapajoz, Rio Jamundá, Monte Alegre (Zimmer)

3 ♂ 1 ♀, Rio Tapajoz, various localities east bank

5 ♂ 2 ♀, Obidos (Carnegie Mus.)

9 ♂ 4 ♀, Santarem (do.)

1 ♂ 1 ♀, Rio Tapajoz, left bank (do.)

729. MYIARCHUS SWAINSONI PELZELNI Berlepsch

Type locality: Bahia

Mexiana Island (Hellmayr, Snethlage, Zimmer); Marajo Island (Snethlage); Boim, Rio Tapajoz (Snethlage); Rio Xingú, Tapará (Zimmer)

1 ♂ 4 ♀, Rio Tapajoz, east bank

1 ♂ 3 ♀, Santarem (Carnegie Mus.)

730. MYIARCHUS SWAINSONI AMAZONUS Zimmer, 1938

Type locality: Rio Jamundá, Faro, Brazil

Mexiana Island, (Hellmayr); Benevides, Santarem (Todd); Rio Tapajoz (Zimmer)

3 ♂ 2 ♀, Rio Tapajoz, east bank

1 ♀, Benevides (Carnegie Mus.)

3 ♂, Santarem (do.)

Typical *swainsoni* is to be expected in our area as a migrant.

731. *MYIARCHUS FEROX FEROX* (Gmelin)

Type locality: Cayenne

Throughout our area (Todd, Proc. Biol. Soc. Wash., **35**, 1922, p. 197, complete list of localities); Pará to Villa Bella Imperatriz (Zimmer)

12 ♂ 10 ♀ 1 ? , Rio Tapajoz, east bank

10 ♂ 12 ♀, Obidos, Benevides, Santarem, Rio Tapajos (Carnegie Mus.)

732. *MYIARCHUS TUBERCULIFER CLARUS* Zimmer, 1938

Type locality: Tapará, Rio Xingú, Brazil

Whole north bank of Amazon (Snethlage); Rio Tapajoz (Todd, loc. cit., p. 211);

Faro, Villa Bella Imperatriz (Zimmer)

2 ♂, Rio Tapajoz, Tauary and Pinhy

5 ♂, Obidos (Carnegie Mus.)

4 ♂ 1 ♀, Santarem (do.)

2 ♂ 1 ♀, Rio Tapajoz, left bank (do.)

733. *MYIARCHUS TUBERCULIFER* subsp.

Pará, Igarape-Assu, 1 ♀, (Zimmer)

1 ♀, Benevides (Carnegie Mus.)

These specimens will probably prove to be *tricolor* Pelzeln, which is restricted by Zimmer to the coast region of eastern Brazil.

734. *CONTOPUS CINEREUS SURINAMENSIS* Penard and Penard

Type locality: Surinam

Mexiana Island (Selater and Hellmayr); Marajo Island (Hellmayr)

735. *EMPIDONAX LAWRENCEI BOLIVIANUS* Allen

Type locality: Yungas, Bolivia

Mexiana Island (Hellmayr); Rio Curuá (Snethlage); Rio Xingú, Tapará (Zimmer)

1 ♀, Boca do Igarape-Piaba, near Obidos

1 ♂, Obidos (Carnegie Mus.)

1 ♀, Benevides (do.)

5 ♂ 3 ♀, Santarem (do.)

1 ♂, Rio Tapajoz, Miritituba (do.)

The Carnegie Museum has series of this bird from the Rio Purus and Rio Solimões.

736. *EMPIDONAX EULERI EULERI* (Cabanis)

Type locality: Cantagallo, Rio de Janeiro

Rio Capim, Rio Muraiteua (Stone); Rio Tocantins (Snethlage); Rio Tapajoz, Igarape Amarin (Zimmer)

1 ♀, Rio Tapajoz, Pinhy

1 ♀ imm., Santarem (Carnegie Mus.)

Presumably a winter migrant to our area.

737. *CNEMOTRICCUS FUSCATUS FUMOSUS* (Berlepsch)

Type locality: Cayenne

Arunanduba, Igarape de Paituna, Obidos, Marajo Island (Snethlage); Mexicana Island and Faro (Zimmer)

2 ♂ 1 ♀, Obidos (Carnegie Mus.)

2 ♂ 3 ♀, islands, Obidos (do.)

738. *CNEMOTRICCUS FUSCATUS FUSCATOR* Chapman

Type locality: Rio Curaray, Ecuador

Rio Tapajoz, Goyana (Snethlage); Villa Bella Imperatriz to Rio Tocantins (Zimmer)

3 ♂ 1 ♀, Santarem (Carnegie Mus.)

3 ♂ 2 ♀ 1 ? , Rio Tapajoz, Goyana Island and left bank (do.)

We are unable to endorse Hellmayr's treatment of this difficult species in the Cat. Birds America, where he refers all birds south of the Amazon to *bimaculatus* (Lafresnaye & D'Orbigny) from Yungas, Bolivia, with the exception, of course, of typical *fuscatus* from southeastern Brazil. We have before us Bolivian topotypes of *bimaculatus*, and it is clear that this pale form ranges through the campo country of western Brazil north to the upper stretches of the Rio Purus and the Rio Madeira. A series (7 spec.) from the Rio Solimões is a very different dark race, slightly darker and browner above, and much darker and heavily flammulated with grayish olive on the chest, and yellowish rather than whitish on the belly. This is *fuscator* Chapman of southeastern Ecuador, and it is clear that birds from Amazonian Peru probably belong here also, judging by Hellmayr's comments. We are quite unable to separate our lower Amazonian series from these birds. Proceeding northeastward, a fine series from Cayenne (21 specimens) represent *fumosus* (Berlepsch), which differs from *bimaculatus* in just the characters ascribed by Hellmayr. We agree that birds from Obidos

belong here, as do a series from the islands in the Amazon between Obidos and Santarem. All these birds are barely separable from *fuscator* Chapman, which is a slightly darker bird on the average, although many specimens are interchangeable. We have here a most unsatisfactory distributional picture, undoubted *fuscator* on the Rio Solimoës, undoubted *bimaculatus* on the upper Purus and the Rio Madeira, while from Villa Bella Imperatriz eastward occurs an admittedly variable and dimorphic population, perhaps nearer *fuscator* than *fumosus*. A conservative position which chose to reduce *fuscator* to the synonymy of *fumosus* could certainly be defended. Hellmayr's treatment was equally conservative, but modern series prove that birds from the south bank of the Amazon in our area most certainly cannot be referred to *bimaculatus*.

739. *TERENOTRICCUS ERYTHRURUS ERYTHRURUS* (Cabanis)

Type locality: Guiana

Rio Jary and Obidos (Snethlage); Rio Jamundá, Faro (Zimmer)

2 ♂, Obidos (Carnegie Mus.)

740. *TERENOTRICCUS ERYTHRURUS HELLMAYRI* Snethlage

Type locality: Pará

The Pará region (all collectors) to the Rio Tocantins (Zimmer)

2 ♂ 1 ♀, Rio Acará, Acará

1 ♀, Benevides (Carnegie Mus.)

741. *TERENOTRICCUS ERYTHRURUS AMAZONUS* Zimmer, 1939

Type locality: Igarapé Amarin, Rio Tapajoz, Brazil

Santarem and Rio Tapajoz (all collectors); Villa Bella Imperatriz (Zimmer)

2 ♂, Rio Tapajoz, Caxiricatuba and Pinhy

1 ♂, Santarem (Carnegie Mus.)

14 ♂ 2 ♀, Rio Tapajoz, both banks (do.)

742. *MYIOBIUS BARBATUS BARBATUS* (Gmelin)

Type locality: Cayenne

Rio Jary and Obidos (Snethlage); Rio Jamundá, Faro (Zimmer)

3 ♂, Obidos (Carnegie Mus.)

743. *MYIOBIUS BARBATUS INSIGNIS* Zimmer, 1939

Type locality: Piquiatuba, Rio Tapajoz, Brazil

Common throughout from Pará region to the Rio Tapajoz

3 ♂ 1 ♀, Rio Tapajoz, various localities east bank

1 ♀, Benevides (Carnegie Mus.)

2 ♂ 2 ♀, Santarem (do.)

5 ♂ 3 ♀, Rio Tapajoz, both banks (do.)

744. *MYIOBIUS ATRICAUDUS CONNECTENS* Zimmer, 1939

Type locality: Mocajuba, Rio Tocantins, Brazil

Pará, Prata, Rio Tocantins, Rio Tapajoz, Rio Jamauchim (Zimmer)

2 ♂, Rio Tapajoz, Pinhy and Caxiricatuba

745. *MYIOPHOBUS FASCIATUS FLAMMICEPS* (Temminck)

Type locality: Rio de Janeiro

Pará (Sclater); Maguary and Mexiana Island (Snethlage)

746. *ONYCHORHYNCHUS CORONATUS CORONATUS* (Müller)

Type locality: Cayenne

Common from Pará region to the Rio Tapajoz; Villa Bella Imperatriz and Faro (Zimmer)

1 ♀, Rio Acará, Acará

1 ♂ 1 ♀, Rio Tapajoz, Caxiricatuba

1 ♂ 3 ♀, Obidos (Carnegie Mus.)

1 ♂ 1 ♀, Benevides (do.)

1 ♂ 5 ♀, Santarem (do.)

1 ♂ 1 ♀, Rio Tapajoz (do.)

747. *PLATYRINCHUS SENEX GRISEICEPS* Salvin

Type locality: Ourumee, British Guiana

Obidos (Snethlage)

12 ♂ 8 ♀, Obidos (Carnegie Mus.)

748. *PLATYRINCHUS SENEX AMAZONICUS* Berlepsch

Type locality: Peixe-Boi, Pará

Numerous records Pará region to Rio Tapajoz (Snethlage)

1 ♂ 2 ♀, Rio Tapajoz, Pinhy and Caxiricatuba

6 ♂ 3 ♀, Benevides (Carnegie Mus.)

2 ♂ 1 ♀, Santarem (do.)

4 ♂ 1 ♀, Rio Tapajoz, both banks

749. *PLATYRINCHUS SATURATUS* Salvin and Godman

Type locality: Merumé Mts., British Guiana

Peixe-Boi (Hellmayr); Pará (Stone); Rio Jamundá, Obidos, Rio Jary and Pará region (Snethlage); Faro, Obidos, Utinga (Zimmer)

3 ♂ 1 ♀, Obidos (Carnegie Mus.)

3 ♂ 3 ♀, Benevides (do.)

1 ♀, Santarem (do.)

1 ♀, Rio Tapajoz, Villa Braga (do.)

750. *PLATYRINCHUS CORONATUS CORONATUS* Sclater

Type locality: Rio Napo, Ecuador

Rio Curuá, Rio Jamauchim (Snethlage); Rio Tapajoz, Caxiricatuba (Zimmer)

1 ♂, Rio Tapajoz, Caxiricatuba

5 ♂, (do.), Miritituba (Carnegie Mus.)

751. *PLATYRINCHUS CORONATUS GUMIA* (Bangs and Penard)

Type locality: Paramaribo, Dutch Guiana

Rio Jary (Snethlage Hellmayr); Faro (Zimmer)

752. *TOLMOMYIAS SULPHURESCENS MIXTUS* Zimmer, 1939

Type locality: Baião, Rio Tocantins, Brazil

Known only from the type locality and one station in Maranhão.

753. *TOLMOMYIAS SULPHURESCENS INSIGNIS* Zimmer, 1939

Type locality: Rosarinho, Rio Madeira, Brazil

Rio Jamundá, Faro, Castanhal (Zimmer)

754. *TOLMOMYIAS FLAVOTECTUS ASSIMILIS* (Pelzeln)

Type locality: Borba, Rio Madeira

Rio Tapajoz, Igarapé Amarin, Igarapé Brabo (Zimmer)

1 ♂, Rio Tapajoz, Pataua

755. *TOLMOMYIAS FLAVOTECTUS PARAENSIS* Zimmer

Type locality: Utinga, Pará, Brazil

Utinga and Cametá, Rio Tocantins (Zimmer)

756. *TOLMOMYIAS FLAVOTECTUS EXAMINATUS* (Chubb)

Type locality: Bartica Grove, British Guiana
Rio Jamundá, Faro, Castanhal (Zimmer)

Zimmer's study of this genus (Amer. Mus. Novit., no. 1045) proves that Amazonian records of *sulphurescens* really include races of *flavotectus*, a species previously unrecognized in South America east of the Andes. Unfortunately the genus is quite scarce in our area, and the few specimens examined by Zimmer inevitably leave large distributional gaps. It is of course impossible to allocate the earlier records without reexamination of the specimens. Sneath reports "*assimilis* (Pelzeln) from the Pará region to the Rio Tapajoz. Birds from the Pará region might be either *sulphurescens mixtus* or *flavotectus paraensis*. The identity of birds from Santarem and the right bank of the Rio Tapajoz in the Carnegie Museum is problematical as Zimmer has been unable to examine a specimen of either species from there. No one knows where the subspecies *mixtus* and *insignis* of *sulphurescens* intergrade on the south bank of the Amazon. Equal uncertainty exists with the two races of *flavotectus*, and without comparative material, our one specimen from Pataua might be *paraensis*. The situation is almost as bad on the north bank. Faro is the only place from which both species are reported. The genus is recorded from the Rio Jary (Sneath) and Obidos (Hellmayr). These birds might be *sulphurescens insignis* or *flavotectus examinatus*. On the other hand it is entirely in accord with the distribution of other widely ranging and variable species, that specimens from Obidos (and points further east) might indeed prove to be *sulphurescens cherriei* (Hartert and Goodson), as reported by Hellmayr.

757. *TOLMOMYIAS POLIOCEPHALUS SCLATERI* (Hellmayr)

Type locality: Manaus, Brazil

North bank localities (Sneath), Pará region (numerous collectors) west to Rio Tapajoz (Sneath); Faro and Pará to Villa Bella Imperatriz (Zimmer)

1 ♂ 2 ♀, Pará, Bosque

3 ♂ 4 ♀ 1 ? Rio Tapajoz, various localities, east bank

16 ♂ 10 ♀, Obidos, Santarem, Rio Tapajoz both banks (Carnegie Mus.)

758. *TOLMOMYIAS FLAVIVENTRIS DISSORS* Zimmer, 1939

Type locality: Faro, Rio Jamundá, Brazil

Marajo Island, Rio Tocantins and Rio Tapajoz (Snethlage); Rio Tocantins to Villa Bella Imperatriz (Zimmer)

3 ♂ 2 ♀ 2 ?, Rio Tapajoz, various localities, east bank.

8 ♂ 2 ♀, Santarem (Carnegie Mus.)

It is certainly peculiar that this species is as yet undetected in the Pará region.

759. *TOLMOMYIAS FLAVIVENTRIS COLLINGWOODI* Chubb

Type locality: Trinidad

North bank localities (Snethlage); Monte Alegre (Zimmer)

1 ♀, near Obidos

6 ♂ 1 ♀, Obidos (Carnegie Mus.)

760. *RHYNCHOCYCLUS OLIVACEUS GUIANENSIS* McConnell

Type locality: British Guiana

Throughout area from the Pará region westward on both banks (Hellmayr), Snethlage, Zimmer)

3 ♂ 4 ♀, Rio Tapajoz, various localities, east bank.

16 ♂ 5 ♀, Obidos, Benevides, Santarem, Rio Tapajoz (Carnegie Mus.)

761. *RAMPHOTRIGON RUFICAUDA* (Spix)

Type locality: Amazon River

Pará (Wallace); Rio Capim (Goeldi); Santarem (Riker); Rio Jamundá, Obidos, Rio Maecuru (Snethlage)

2 ♂, Pará, Bosque

4 ♂ 3 ♀, Rio Tapajoz, various localities, east bank

3 ♂ 3 ♀, Obidos (Carnegie Mus.)

2 ♂ 1 ♀, Benevides (do.)

5 ♂ 6 ♀, Santarem (do.)

2 ♂ 1 ♀, Rio Tapajoz, left bank

A fine series from the Solimoës (wing 73-80, average 75) is obviously a different subspecies from a series from Cayenne of similar size. The latter are paler and yellower below, less heavily flammulated with olive green. The Santarem and Tapajoz birds are intermediate. The Pará birds appear to be a little larger (wing 80-81), but a bigger series is required to confirm this. In color they resemble Rio Solimoës birds exactly.

762. *TODIROSTRUM CHRYSOCROTAPHUM ILLIGERI* (Cabanis and Heine)

Type locality: Pará

Pará (Cabanis, Hellmayr, Snethlage, Stone); Rio Tocantins (Snethlage)

1 ♂, Santarem (Carnegie Mus.)

1 ♂ 1 ♀, Rio Tapajoz, Itaituba and Villa Braga (do.)

The two birds from the left bank of the Rio Tapajoz¹ differ from *illigeri* in lacking the malar stripe, and have minutely less white on the throat, thereby approaching *chrysocrotaphum* (subsp.?), which is recorded from the Rio Madeira.

763. *TODIROSTRUM PICTUM* Salvin

Type locality: Annai, British Guiana

Obidos (Snethlage)

3 ♂ 2 ♀ 1 ?, Obidos (Carnegie Mus.)

This series is obviously a different subspecies from another series from French Guiana, in being paler, less golden yellow below, much less heavily spotted, and streaked with black. However, there is no surety that French Guiana birds properly represent true *pictum* from British Guiana. Moreover, *guttatum* Pelzelin from the Rio Negro is almost certainly conspecific, and may or may not be properly represented by specimens from the Rio Solimoës.

764. *TODIROSTRUM CINEREUM CINEREUM* (Linnæus)

Type locality: Surinam

Marajo Island (Hellmayr, Snethlage); Monte Alegre (Snethlage); Santarem (Chapman and Riker)

2 ♂ 2 ♀, Santarem

1 ♂ 2 ♀, Obidos (Carnegie Mus.)

1 ♂, Santarem (do.)

This common and widely ranging species has a scattered distribution in our area, where the typical form is at its extreme southeastern limit. There are other races in Brazil south of the Amazon. Marajo Island birds might approach *ccaræ*.

¹ Since described as *similis* Zimmer, Amer. Mus. Novit., no. 1066, May 3, 1940, p. 3.

765. *TODIROSTRUM MACULATUM MACULATUM* (Desmarest)

Type locality: French Guiana

Common on the north shore of the Amazon, Marajo and Mexiana Islands, and the Pará region west to the Rio Tocantins

- 1 ♂ 1 ♀, near Obidos
- 2 ♂ 1 ♀, Benevides (Carnegie Mus.)
- 1 ♂ 1 ♀, Obidos (do.)

766. *TODIROSTRUM MACULATUM SIGNATUM* Selater and Salvin

Type locality: Nauta, Rio Marañon, Peru

Common from the Rio Xingú to the Rio Tapajoz

- 13 ♂ 4 ♀ 1 ?, Rio Tapajoz, various localities, east bank
- 5 ♂ 1 ♀, Santarem (Carnegie Mus.)
- 3 ♂ 1 ♀, Rio Tapajoz, both banks (do.)

As Hellmayr has pointed out, birds from the Rio Tapajoz are transitional between true *maculatum* of the Guianas and *signatum* of upper Amazonia.¹ We agree that they are nearer *signatum*. Our series is notably shorter billed than a series from Surinam, averaging 2-3 mm. shorter. The two birds from near Obidos are intermediate in coloration, but have the longer bill of Surinam birds, so we refer them to typical *maculatum*.

767. *TODIROSTRUM LATIROSTRE SENECTUM* Griscom and Greenway, 1937.

Type locality: Obidos, Brazil

Santarem (Ihering), not given by Sneath

- 1 ♂ 1 ♀, north bank of Amazon, Boca do Igarapé-Piaba near Obidos
- 5 ♂, Obidos (Carnegie Mus.)
- 5 ♂ 2 ♀, Santarem (do.)

Recent publications on this species have plunged this unfortunate little Tody-Tyrant into systematic confusion. Typical *latirostre* comes from Borba, Rio Madeira, and Dr. Hellmayr, the only student who has seen Pelzeln's type, has always stated that Bolivian, Matto Grosso (Chapada) and Rio Solimoës birds are typical, giving a distribution by no means exceptional. On this basis typical *latirostre* is a relatively light colored and brownish headed bird, in spite of the fact that

¹ Since described as *diversum* Zimmer, Amer. Mus. Novit., no. 1066, 1940, p. 6.

Pelzeln described the type as "pileo plumbeo induto". There is no question about the very distinct *caniceps* Chapman, a much darker bird, with a dark grayish olive crown, and more yellow wash on the abdomen. Only two specimens are known from the type locality in eastern Colombia, and birds from various parts of Amazonian Ecuador may or may not properly represent it.

In May 1937, we described *senectum* from Obidos on the north bank of the Amazon, a considerable range extension of the species to the east. We had the advantage of examining the series in the Carnegie Museum first. *Senectum* is in general coloration intermediate between *latirostre* and *caniceps*, but most fortunately our notes, made at the time, state that Obidos birds are slightly grayer, less green above, wing bars and edgings paler, less rusty buff, below grayer on throat and chest, less yellow on flanks and belly than 18 specimens from the Rio Purus and Rio Solimões. Compared with Matto Grosso specimens of *ochropterus* Allen, = typical *latirostre* fide Hellmayr, Obidos birds are greener above and slatier, less brownish on the pileum. Compared with east Ecuador specimens of *caniceps*, Obidos birds are not so dark above, the pileum is not quite so clearly slaty, with less extension of the gray on to the hindneck and mantle, while the underparts are much nearer *latirostre*.

We were somewhat surprised when in November, 1937, Mr. Todd described *difficile* from the Rio Purus and Rio Solimões (south bank), his series amply confirming the differences noted by Hellmayr in two specimens from Teffe as compared with typical *latirostre*. But Mr. Todd (1) never mentioned *senectum*, (2) his description of *difficile* practically duplicates the characters ascribed to *senectum*, and (3) he states that Obidos birds are indistinguishable from *caniceps*, whereas we consider the same birds slightly paler than his *difficile*, which is paler than *caniceps*!

It is obviously high time for someone to compare these proposed subspecies with a real series from the Rio Madeira, and let us hope that the American Museum possesses one. This series may prove that Pelzeln had a slaty crowned bird after all, in which case the Matto Grosso birds will bear the name *ochropterus* (Allen), and it would remain to be determined how many races would prove recognizable in the Amazon Valley proper.¹

¹ Zimmer (Amer. Mus. Novit., no. 1066, 1940) shows that *difficile* = *latirostre*, and recognizes *senectum*.

768. *TODIROSTRUM SYLVIA SCHULZI* Berlepsch

Type locality: Ourem, Rio Guamá
 Santa Isabel, San Antonio do Prata (Snethlage)
 1 ♀, Benevides (Carnegie Mus.)

This species is as yet unrecorded between the upper Rio Branco and the localities listed above.

769. *EUSCARTHMORNIS STRIATICOLLIS GRISEICEPS* (Todd)

Type locality: Santarem, Rio Tapajoz
 Santarem (Chapman and Riker, Snethlage and Hellmayr); Cussary (Snethlage)
 6 ♂ 6 ♀ 1 ?, Rio Tapajoz, various localities, east bank
 12 ♂ 5 ♀, Santarem (Carnegie Mus.)
 1 ♀, Rio Tapajoz, Miritituba (do.)

An exceedingly local race known only from the Rio Tapajoz, right bank.

770. *EUSCARTHMORNIS STRIATICOLLIS IOHANNIS* (Snethlage)

Type locality: Monte Verde, Rio Purus
 1 ♀, Rio Tapajoz, Villa Braga (Carnegie Mus.)

This specimen appears to agree very well with a series from the Rio Purus, and not with the type series of *griseiceps*.

771. *EUSCARTHMORNIS GRISEIPECTUS* Snethlage

Type locality: Alcobaça, Rio Tocantins, 5 ♂
 1 ♂, Santarem (Carnegie Mus.)

This rare species is otherwise recorded only from southeastern Peru! There are specimens from the Rio Purus in Pittsburgh.

772. *SNETHLAGEA MINOR* (Snethlage)

Type locality: Arumatheua, Rio Tocantins
 Also Rio Tapajoz, Villa Braga, Pinhel, Boim (Snethlage)
 10 ♂ 4 ♀, Rio Tapajoz, Apaçy, Villa Braga and Itaituba (Carnegie Mus.)

773. *SNETHLAGEA MINIMA MINIMA* Todd

Type locality: Itaituba, Rio Tapajoz

Also Rio Tocantins to Rio Madeira (Todd and Hellmayr)

1 ♂ 1 ♀, Rio Tapajoz, Tauary

4 ♂ 4 ♀, (do.), both banks (Carnegie Mus.)

The male from Tauary is a most unsatisfactory specimen. In color characters clearly *minima* and not *minor*. The wing length is 47 mm., which is too large for *minima*, but too small for males of *minor*. The tail is exactly the same length as in a male *minor* before us. In other words, this specimen is half way between these two supposed species, which appear very dubious to us, so we do not recognize *S. minor snethlageæ* H. Snethlage, 1937.

774. *TAENIOTRICCUS KLAGESI* Todd

Type locality: Itaituba, left bank of Rio Tapajoz

Type examined by us. As Hellmayr points out, the unique type will probably prove to be the female of *T. andrei* Berlepsch and Hartert from the Caura River valley, Venezuela, only known from one immature male.

775. *LOPHOTRICCUS VITIOSUS* subsp.

Rio Jamundá, Faro; Obidos; Rio Jary (Snethlage)

2 ♂ 1 ♀, Obidos (Carnegie Mus.)

These birds are certainly not *eulophotes* Todd from the Rio Purus, but they can hardly be true *vitiosus* from "Peru".

776. *COLOPTERYX GALEATUS* (Boddaert)

Type locality: Cayenne

Common throughout our area (all collectors), except Marajo and Mexiana Islands

1 ♀, Rio Acará, Acará

13 ♂ 3 ♀, Rio Tapajoz, various localities, east bank

2 ♂ 1 ♀, Obidos (Carnegie Mus.)

2 ♂, Benevides (do.)

5 ♂, Santarem (do.)

2 ♂ 1 ♀, Rio Tapajoz, both banks

777. *PERISSOTRICCUS ECAUDATUS ECAUDATUS* (Lafresnaye and D'Orbigny)

Type locality: Yuracares, Bolivia

Peixe-Boi (Hellmayr); Santarem (Hellmayr); Pará region, Rio Tocantins, Rio Jamauchim, Rio Tapajoz, Rio Jary, Rio Jamundá (Snethlage)

3 ♂ 1 ♀, Rio Tapajoz, various localities, east bank

1 ♀, Obidos (Carnegie Mus.)

9 ♂ 7 ♀, Rio Tapajoz, left bank (do.)

1 ♂ 2 ♀, Santarem (do.)

Specimens from the north bank of the Amazon might prove referable to *miserabilis* Chubb from British Guiana, of which we have no comparative material.

778. *CAPSIEMPIS FLAVEOLA FLAVEOLA* (Lichtenstein)

Type locality: Bahia

Mexiana Island (Wallace, Hellmayr); Rio Tocantins, Rio Iriri, Rio Tapajoz, Rio Maecuru, Obidos, Rio Jamundá (Snethlage)

8 ♂ 3 ♀, Rio Tapajoz, various localities, east bank

10 ♂ 5 ♀, Obidos (Carnegie Mus.)

779. *STIGMATURA BUDYTOIDES NAPENSIS* Chapman

Type locality: Curary and Napo Rivers, Ecuador, Rio Tapajoz, Pinhel (Snethlage); Santarem (Hellmayr)

1 ♂ 1 ♀, Rio Tapajoz, east bank, Pinhy

3 ♂ 1 ♀, Rio Tapajoz, west bank, Pinhel

780. *SERPOPHAGA HYPOLEUCA PALLIDA* Snethlage

Type locality: Alcôbaça, Rio Tocantins

1 ♀, Lago Grande, west of Santarem

2 ♂ 1 ♀, Santarem (Carnegie Mus.)

We have no material for comparison. These specimens are distinctly browner above than 1 *hypoleuca* from east Ecuador, and are also a little larger (wing 51 mm.); in these two respects agreeing with the diagnosis of *pallida* from the Tocantins. They are not more purely white below, however. A distinct buffy tinge on the flanks may or may not be due to immaturity.

781. *INEZIA SUBFLAVA SUBFLAVA* (Sclater and Salvin)

Type locality: "Pará"

Rio Tocantins to the Rio Tapajoz, both banks (Snethlage)

1 ♂ 3 ♀, Rio Tapajoz, various localities, east bank

5 ♂ 3 ♀, (do.) both banks (Carnegie Mus.)

782. *ELAINEA FLAVOGASTER FLAVOGASTER* (Thunberg)

Type locality: Rio de Janeiro

Apparently abundant throughout the region (all collectors)

1 ♂, Pará, Bosque

25 ♂ 4 ♀ 1 ?, Rio Tapajoz, various localities, east bank

1 ♀, Obidos

3 ♂ 4 ♀, Benevides (Carnegie Mus.)

2 ♂ 1 ♀, Santarem (do.)

783. *ELAINEA ALBICEPS ALBICEPS* (Lafresnaye and D'Orbigny)

Type locality: Yungas, Bolivia

Arumatheua, Rio Tocantins (Snethlage)

784. *ELAINEA PARVIROSTRIS* Pelzeln

Type locality: Borba, Rio Madeira

1 ♀, Rio Tapajoz, Santarem

1 ♂ 1 ♀, Santarem (Carnegie Mus.)

785. *ELAINEA PELZELNI* Berlepsch

Type locality: Lamalonga, Rio Negro, Brazil

Monte Alegre, Rio Maecuru, Obidos (Snethlage)

1 ♀, Rio Tapajoz, Santarem

10 ♂ 6 ♀, Obidos (Carnegie Mus.)

6 ♂ 2 ♀, Santarem (do.)

A rare and little known species, easily recognized by its large size and brown coloration above. Previously unrecorded from the south bank of the Amazon.

786. *ELAINEA CRISTATA* Pelzeln

Type locality: Goyaz, Brazil

Rio Tapajoz, Boim, and Monte Alegre (Snethlage)

- 1 ♂, Rio Tocantins, Cametá
- 2 ♂, 4 ♀, Rio Tapajoz, Santarem
- 2 ♀, Obidos (Carnegie Mus.)
- 1 ♀, Benevides (do.)
- 6 ♂ 11 ♀, Santarem (do.)
- 1 ♂ 1 ♀, Rio Tapajoz (do.)

787. *ELAINEA CHIRIQUENSIS ALBIVERTEX* Pelzeln

Type locality: Ypanema, Sao Paulo

Marajo Island, Rio Tocantins, Rio Tapajoz (Snethlage)

- 2 ♂ 6 ♀, Rio Tapajoz, various localities, east bank

788. *ELAINEA GAIMARDII GUIANENSIS* Berlepsch

Type locality: Camacusa, British Guiana

Peixe-Boi, San Antonio do Prata (Hellmayr); Rio Guamá (Stone); Pará region to right bank of Rio Tocantins, Obidos, and Rio Jamundá, Faro (Snethlage)

- 5 ♂ 2 ♀, Obidos (Carnegie Mus.)

789. *ELAINEA GAIMARDII GAIMARDII* (D'Orbigny)

Type locality: Yuracares, Bolivia

Left bank of Rio Tocantins to Rio Tapajoz (Snethlage)

- 11 ♂ 15 ♀, Rio Tapajoz, various localities, east bank
- 7 ♂ 8 ♀, Santarem (Carnegie Mus.)
- 5 ♂ 1 ♀, Rio Tapajoz, both banks

790. *ELAINEA FLAVIVERTEX* Sclater

Type locality: Ucayali, Peru

Mexiana Island, (Hellmayr); Monte Alegre, Rio Jamundá, Faro (Snethlage)

- 1 ♂, near Obidos
- 3 ♂, Rio Tapajoz, Santarem
- 7 ♂ 3 ♀, Santarem (Carnegie Mus.)

791. *ELAINEA VIRIDICATA VIRIDICATA* (Vieillot)

Type locality: Paraguay

Boim, Rio Tapajoz (Snethlage)

1 ♂ juv., Rio Tapajoz, Santarem

7 ♂ 4 ♀, Santarem (Carnegie Mus.)

792. *SUIRIRI AFFINIS AFFINIS* (Burmeister)

Type locality: Lagoa Santa, Minas Geraes.

Serra de Ereré, near Monte Alegre, north bank of Amazon, 1 ♂ (Snethlage)

One of the characteristic campo species, little known in our area. It should be sought in the localities on the south bank, where this fauna occurs.

793. *SUBLEGATUS MODESTUS OBSCURIOR* Todd

Type locality: Cayenne

Mexiana Island (Wallace, Hagmann); Monte Alegre and Ereré (Snethlage);
Pará (Stone)

4 ♂ 7 ♀, Obidos (Carnegie Mus.)

794. *SUBLEGATUS MODESTUS MODESTUS* (Wied)

Type locality: Camamú, Brazil

1 ♂, Rio Tapajoz, Tauary

2 ♂, Santarem (Carnegie Mus.)

795. *PHLEOMYIAS MURINA INCOMPTA* (Cananis and Heine)

Type locality: Cartagena, Colombia

Monte Alegre (Snethlage)

5 ♂, Obidos (Carnegie Mus.)

796. *PHLEOMYIAS MURINA MURINA* (Spix)

Type locality: Brazil

Pará (Layard, Hellmayr, Stone); Mexiana Island Wallace, Hellmayr); Santarem (Hellmayr); Marajo Island (Hellmayr); Pará region, Rio Tocantins, Rio Tapajoz (Snethlage)

4 ♂ 8 ♀ 1 ?, Rio Tapajoz, various localities, east bank.

1 ♂, 3 ♀, (do.), both banks (Carnegie Mus.)

5 ♀, Santarem (do.)

797. *CAMPTOSTOMA OBSOLETUM* NAPÆUM Ridgway

Type locality: Diamantina, Santarem

Common throughout our area (all collectors)

3 ♂ 3 ♀, Rio Tapajoz, various localities, east bank

11 ♂ 13 ♀, Obidos, Benevides, Santarem, Rio Tapajoz (Carnegie Mus.)

798. *PHYLLOMYIAS GRISEICEPS* (Sclater and Salvin)

Type locality: Babahoyo, Ecuador

3 ♂ 1 ♀, Obidos (Carnegie Mus.)

These birds and another from French Guiana have smaller bills than has a large series from Venezuela.

799. *TYRANNISCUS ACER* Salvin and Godman

Type locality: Bartica Grove, British Guiana

Marajo Island (Snethlage); Caviana Island (Brodkorb); Pará (Layard); Peixe-Boi (Hellmayr); Pará region, Rio Tocantins, Rio Jamundá (Snethlage)

3 ♂, Pará, Val-de-Caes, and Bosque

5 ♂, Rio Tapajoz, various localities, east bank

1 ♂ 2 ♀, Obidos (Carnegie Mus.)

3 ♂, Benevides (do.)

11 ♂ 7 ♀, Santarem (do.)

800. *TYRANNULUS ELATUS ELATUS* (Latham)

Type locality: Cayenne

Pará region (Spix, Hellmayr, Snethlage, Stone); Rio Tocantins and Rio Tapajoz (Snethlage); Santarem (Ihering, Chapman and Riker); Monte Alegre, Rio Jamundá, Faro (Snethlage)

2 ♂ 1 ♀, near Obidos

4 ♂ 4 ♀ 1 ?, Rio Tapajoz, various localities, east bank

17 ♂ 5 ♀, Obidos, Benevides, Santarem, Rio Tapajoz (Carnegie Mus.)

801. *ORNITHION INERME* Hartlaub

Type locality: Bahia

Rio Guamá, Pará, Rio Tocantins (Snethlage); Rio Tapajoz (Hellmayr)

1 ♂ 2 ♀, Rio Tapajoz, Pinhy, Tauary, Caxiricatuba

1 ♂ 2 ♀, Benevides (Carnegie Mus.)

1 ♂, Santarem (do.)

3 ♂, Rio Tapajoz, both banks (do.)

802. *PIPROMORPHA OLEAGINEA OLEAGINEA* (Lichtenstein)

Type locality: Bahia

Pará, San Antonio do Prata, Mexiana Island (Hellmayr)

1 ♂, Rio Tapajoz, Caxiricatuba

1 ♂ 4 ♀, Obidos (Carnegie Mus.)

2 ♂ 2 ♀, Benevides (do.)

6 ♂, Santarem (do.)

3 ♂ 2 ♀, Rio Tapajoz, left bank

803. *PIPROMORPHA MACCONNELLI MACCONNELLI* Chubb

Type locality: Camacabra Creek, British Guiana

2 ♂, Obidos (Carnegie Mus.)

804. *PIPROMORPHA MACCONNELLI AMAZONA* Todd

Type locality: Buenavista, Bolivia

Peixe-Boi, Benevides, Ourem (Hellmayr)

1 ♂ 1 ♀, Pará, Bosque and Val-de-Caes

2 ♂ 1 ♀, Rio Tapajoz, various localities, east bank

5 ♂, Benevides (Carnegie Mus.)

1 ♀, Santarem (do.)

11 ♂ 2 ♀, Rio Tapajoz, both banks (do.)

All birds in the lower Amazon valley were called *oleaginea*, until Todd showed there were two species in 1921. Numerous old records, including many by Snethlage from throughout our area, cannot be allocated without reexamination.

Family OXYRUNCIDAE

805. *OXYRUNCUS CRISTATUS HYPOGLAUCUS* (Salvin and Godman)

Type locality; Mt. Roraima, British Guiana

1 ♂ 1 ♀, Belem, Val-de-Caes

A notable range extension for this little known family of birds. Typical *cristatus* is the form of southeastern Brazil, and *hypoglaucus* was supposed to be confined to Mt. Roraima, of which we have a single topotypical male. Our male from Belem has the spotting below appreciably paler, but this degree of difference is covered by individual variation in other subspecies.

Family HIRUNDINIDAE

S06. PROGNE SUBIS SUBIS (Linnæus)

Type locality: Hudson's Bay

Cussary and Rio Jamundá, Faro (Snethlage)

1 ♂, Rio Tapajoz, Goyana Island, Dec. 23, 1919, in (Carnegie Mus.)

Apparently the winter home of the Purple Martin is chiefly in northern and eastern Brazil, but there are still very few records.

S07. PROGNE CHALYBEA CHALYBEA (Gmelin)

Type locality: Cayenne

The species is common throughout our area (nearly all collectors)

1 ♂ 1 ♀, north bank of Amazon, near Obidos

5 ♂ 3 ♀, 1 ?, Rio Tapajoz, east bank (approaching *domestica*)

1 ♀, Obidos (Carnegie Mus.)

1 ♀, Santarem (do.)

1 ♂, Rio Tapajoz, Goyana Island (do.)

The Tapajoz series is so perfectly intermediate that we list them separately as such. The birds are half way between the two races in size, and some of the males approach *domestica* in having whiter underparts, while others do not.

S08. PROGNE CHALYBEA DOMESTICA (Vieillot)

Type locality: Paraguay

1 ♂, Rio Acará, Villa Acará

The Acará specimen is typical *domestica* in coloration, but is a little smaller than southern birds. It is much larger, however, than Surinam specimens of *chalybea*. The facts are that the lower Amazon valley is occupied by variously intermediate birds, the majority of which are nearer to *chalybea* than *domestica*, and there is every possibility that *domestica* may be partly migratory also.

S09. PHAEOPROGNE TAPERA TAPERA (Linnæus)

Type locality: Cayenne

Common throughout our area (Snethlage)

10 ♂ 3 ♀, Rio Tapajoz, various localities

1 ♀, Santarem, (Carnegie Mus.)

7 ♂ 6 ♀, Rio Tapajoz, Miritituba (do.)

The southern race *fusca* (Vieillot) is migratory, and is recorded from parts of Amazonia, Venezuela and British Guiana. It should, consequently, be expected in our area.

[The North American *Petrochelidon pyrrhonota pyrrhonota* (Vieillot) should be expected in our area on migration.]

810. STELGIDOPTERYX RUFICOLLIS RUFICOLLIS (Vieillot)

Type locality: Rio de Janeiro, Brazil

Apparently common throughout our area (numerous collectors)

2 ♂, Pará, Val-de-Caes

4 ♀, Rio Tapajoz, east bank

2 ♂ 5 ♀, Benevides (Carnegie Mus.)

3 ♂ 1 ♀, Santarem (do.)

2 ♂ 3 ♀, Rio Tapajoz, both banks (do.)

811. PYGOCHELIDON CYANOLEUCA CYANOLEUCA (Vieillot)

Type locality: Paraguay

1 ♀, Benevides, Sept. 13, 1918 (Carnegie Mus.)

Purely a migrant or winter visitant to our area.

812. ATTICORA FASCIATA (Gmelin)

Type locality: Cayenne

Rio Capim (Gmelin); Rio Capim and Cunany (Snethlage)

The wide range of this Swallow makes the lack of records in our area quite inexplicable, unless it is migratory.

813. ATTICORA MELANOLEUCA (Wied)

Type locality: Rio Belmonte, Bahia, Brazil

Rio Tocantins, Rio Xingú, Rio Jamauchim (Snethlage)

814. RIPARIA RIPARIA RIPARIA (Linnæus)

Type locality: Sweden

7 ♂ 9 ♀, Lago January, near Obidos, March 16-18, 1933

1 ♂ 1 ♀, Obidos, March 23 and 25, 1921 (Carnegie Mus.)

Apparently previously overlooked in our area, where it is presumably a transient visitant on migration.

815. *HIRUNDO RUSTICA ERYTHROGASTER* Boddaert

Type locality: Cayenne

One seen in February at Pará docks (Bond, in Stone); Pará, San Antonio do Prata, Marajo and Mexiana Islands, Rio Jamunda (Snethlage); Mexiana Island (Wallace, Hagmann); Santarem, March 1, 1889 (Chapman and Riker)

5 ♂ 7 ♀ 1 ?, north bank of Amazon, near Obidos, March 16, 1933

1 ♂ 4 ♀, Obidos, March 24-26, 1921 (Carnegie Mus.)

1 ♂, Santarem, March 25, 1919 (do.)

1 ♀, Rio Tapajoz, Itaituba, March 13, 1920 (do.)

There was obviously a heavy migration of North American swallows in March, 1933, the Bank Swallows having been taken at the same time. One of these Barn Swallows is inseparable from numerous European specimens of *rustica*.

816. *IRIDOPROCNE ALBIVENTER ALBIVENTER* (Boddaert)

Type locality: Cayenne

Common throughout our area (all collectors)

8 ♂ 4 ♀, Rio Tapajoz, various localities, east bank

1 ♀, Obidos (Carnegie Mus.)

2 ♂, Santarem (do.)

1 ♂ 1 ♀, Rio Tapajoz, Villa Braga (do.)

This series agrees with others from the Rio Tocantins and topotypes from Surinam in color. The wings of males from Surinam are 99-104 mm., from the lower Amazon 99-107 mm., and from southeastern Brazil 107-108 mm. Southern birds are progressively larger, but there is no color change. A fine adult male from Amazonian Ecuador has the wing 108 mm. It differs radically in color from eastern birds in having the head bluish green, the back green with no bluish tinge, and the tail with no steel blue reflections, the feathers dusky to hoary stone gray. Should further specimens confirm these differences and show a definite geographic range, there would be a perfectly valid subspecies, which would probably have to be called *aequatorialis* Lawrence, though we quite agree with Hellmayr (1935, p. 73, footnote) that the characters originally claimed have no validity whatever.

Family TROGLODYTIDAE

817. HELEODYTES TURDINUS HYPOSTICTUS (Gould)

Type locality: Rio Ucayali, Peru

Left bank, Rio Tapajoz (Snethlage)

1 ♀, Rio Tapajoz, Boim, wing 84 mm.

818. HELEODYTES TURDINUS subsp.

Santarem (Chapman and Riker); Rio Xingú and Rio Tocantins (Snethlage)

1 ♀, Obidos (Carnegie Mus.)

13 ♂ 7 ♀, Santarem (do.)

Lack of topotypes from eastern Peru makes any final disposition of lower Amazonian birds impossible. While *hypostictus* in the aggregate differs from typical *turdinus* in more heavily spotted underparts, specimens are well known to be exceedingly variable. There is, however, a marked increase in size, the break occurring on the Rio Tapajoz. The table of wing measurements below brings this out clearly.

	♂	♀
11 Rio Solimoës	87-92	79-87
8 Rio Purus	85-88	82-83
1 Rio Tapajoz, Boim	—	84
1 Obidos	—	91
20 Santarem	91-97	88-91

In color characters, the large birds from Santarem agree with "*hypostictus*", but the female from Boim is in this respect indistinguishable from *turdinus*. The meager evidence before us suggests that adequate series covering the enormous range assigned to *hypostictus* will show the desirability of recognizing several subspecies differing in average characters.

819. ODONTORCHILUS CINEREUS (Pelzeln)

Type locality: Salto de Girão, Rio Madeira

Rio Iriri, a tributary of the Rio Xingú (Snethlage); Rio Tapajoz, Miritituba and Colonia do Mojuy (2 ♀ in Carnegie Museum examined)

This very rare species is still known from only four specimens.

820. *THRYOTHORUS LEUCOTIS TÆNIOPTERUS* Ridgway

Type locality: Diamantina, Santarem, Brazil

Common throughout our area (all collectors); recorded from Marajo, but not Mexiana Island

2 ♂, near Obidos

8 ♂ 3 ♀, Rio Tapajoz, Tauary and Pinhy

5 ♂, Obidos (Carnegie Mus.)

9 ♂ 6 ♀, Santarem (do.)

4 ♂ 1 ♀, Rio Tapajoz, left bank (do.)

With 37 specimens before us of typical *albipectus*, and 38 specimens representing *tæniopterus*, we agree with Todd in recognizing the latter as a valid subspecies. While freely admitting the great amount of individual color variation in this species, these great series show conclusively that typical *albipectus* is more richly colored below, more cinnamonaceous or tawny. There is also a marked size difference, which alone would entitle *tæniopterus* to recognition. Cayenne birds average 5-8 mm. longer wing, with a notably longer bill.

821. *THRYOTHORUS GENIBARBIS GENIBARBIS* Swainson

Type locality: Bahia, Brazil

Throughout our area on the south bank of the Amazon from the Pará region to the Rio Tapajoz

6 ♂, Pará, Bosque, and Val-de-Caes

11 ♂, 11 ♀, Benevides (Carnegie Mus.)

8 ♂ 5 ♀, Rio Tapajoz (do.)

This variable species is widely spread south of the Amazon. The typical form is replaced by *juruanus* on the left bank of the Rio Madeira westward.

822. *THRYOTHORUS CORAYA CORAYA* (Gmelin)

Type locality: Cayenne

Rio Jamundá, Obidos and Rio Jary (Snethlage)

6 ♂ 6 ♀, Obidos (Carnegie Mus.)

823. *THRYOTHORUS CORAYA HERBERTI* Ridgway

Type locality: Diamantina, Santarem

Abundant from the Rio Tocantins to the Rio Tapajoz

16 ♂ 13 ♀ 1 ?, Rio Tapajoz, various localities

4 ♂ 3 ♀, (do.), both banks (Carnegie Mus.)

17 ♂ 10 ♀, Santarem (do.)

The relationships between this species and *genibarbis* on the south bank of the Amazon are as yet unrecorded. The latter is abundant in the Pará region, and the present species unknown there, in spite of a wider geographic range.

824. TROGLODYTES MUSCULUS CLARUS Berlepsch and Hartert

Type locality: Bartica Grove, British Guiana

Common in clearings throughout our area (all collectors)

- 1 ♂, Pará, Bosque
- 4 ♂ 1 ♀, Rio Tapajoz, various localities
- 2 ♂ 2 ♀, Lago Grande
- 3 ♂ 1 ♀, Obidos (Carnegie Mus.)
- 1 ♂ 3 ♀, Benevides (do.)
- 3 ♂ 3 ♀, Rio Tapajoz, Apaçy

The males from Pará are more richly colored than typical *clarus* and distinctly approach *musculus*, which ranges as far north as Ceará. So far as we can find, House Wrens from Maranhão have yet to be critically studied.

825. MICROCERCULUS BAMBLA BAMBLA (Boddaert)

Type locality: Cayenne

- 2 ♂, Obidos (Carnegie Mus.)

This species is new to Brazil. The two adults are not separable from Cayenne topotypes.

826. MICROCERCULUS MARGINATUS MARGINATUS (Sclater)

Type locality: "Bogota"

San Antonio do Prata and Peixe-Boi (Hellmayr); Pará region, various localities (Snethlage)

- 1 ♀, Rio Tapajoz, Tauary
- 7 ♂ 4 ♀, Benevides (Carnegie Mus.)
- 6 ♂, Santarem (do.)
- 5 ♂, Rio Tapajoz, Villa Braga, and Miritituba (do.)

Inseparable from 29 specimens from the Rio Purus and Rio Solimões.

827. LEUCOLEPIS ARADA ARADA (Hermann)

Type locality: Cayenne

Obidos and Rio Jary (Snethlage)

- 11 ♂ 6 ♀, Obidos (Carnegie Mus.)

828. *LEUCOLEPIS ARADA GRISEOLATERALIS* Ridgway

Type locality: Diamantina, Santarem, Brazil

Santarem (Chapman and Riker); Rio Jamauchim (Snethlage)

5 ♂ 3 ♀, Rio Tapajoz, Tauary, Caxiricatuba, Pataua

16 ♂ 15 ♀, Santarem (Carnegie Mus.)

9 ♂ 10 ♀, Rio Tapajoz, right bank (do.)

829. *LEUCOLEPIS ARADA INTERPOSITA* Todd

Type locality: Villa Braga, left bank of Rio Tapajoz

Also Apaçy (Todd), west to the right bank of the Rio Madeira

12 ♂ 12 ♀, the type series in Carnegie Mus.

Family MIMIDAE

830. *MIMUS GILVUS ANTELIUS* Oberholser

Type locality: Bahia

Cajutuba (Natterer)

831. *MIMUS SATURNINUS SATURNINUS* (Lichtenstein)

Type locality: Rio Tapajoz, Pará

Santarem (Allen, Riker and Chapman, Snethlage); Monte Alegre (Snethlage)

The rarity of this genus in lower Amazonia is just what would be expected of open country birds in a prevailingly forested area. *M. saturninus* is a common bird in the campo country south of our area and is currently called *frater* Hellmayr, but the validity of this race should be checked with an adequate series of typical *saturninus*.

832. *DONACOBIVS ATRICAPILLUS ATRICAPILLUS* (Linnaeus)

Type locality: eastern Brazil

Common on the north side of the Amazon, the Pará region, and Mexiana Island (all collectors); Santarem (Chapman and Riker); unrecorded from Marajo Island and anywhere else on the south bank between Pará and the Tapajoz

3 ♂ 2 ♀, near Obidos

1 ♂, Obidos (Carnegie Mus.)

2 ♂ 2 ♀, Santarem (do.)

Family TURDIDAE

833. *TURDUS PHAEOPYGUS POITEAUI* Bonaparte

Type locality: Cayenne

Obidos (Todd, as *cayennensis* Todd).

1 ♂ 4 ♀, Obidos (Carnegie Mus.)

834. *TURDUS PHAEOPYGUS COLORATUS* Todd

Type locality: Colonia de Mojuy, Santarem.

Pará region, common (all collectors); Rio Acará Hellmayr); Rio Tocantins (Snethlage)

6 ♂ 1 ♀, Rio Tapajoz, east bank

1 ♂ 1 ♀, Benevides (Carnegie Mus.)

3 ♂ 3 ♀, Santarem (do.)

Whether *albicollis* and *phaeopyus* are conspecific or not is a matter of opinion. Mr. Todd (Proc. Biol. Soc. Wash., 44, 1931, p. 51) considers specimens from the Pará region to be a third subspecies which he does not describe for lack of material, but these birds seem to us to be intermediate between the two races listed here, which appear very distinct.

835. *TURDUS NUDIGENIS GYMNOPHTHALMUS* Cabanis

Type locality: Cayenne, designated by Berlepsch

Amapá, Rio Jamundá, Faro (Snethlage)

A fine series from Cayenne is easily separable from an equally fine series from Venezuela (typical *nudigenis*) in being darker, more umber brown on throat and chest below.

836. *TURDUS NUDIGENIS EXTIMUS* Todd

Type locality: Santarem, Brazil, Cussary (Snethlage)

3 ♂ 3 ♀, Santarem, (Carnegie Mus.)

There is disagreement between Messrs. Todd and Hellmayr on this species also. The former assigns all records from the Lower Amazon to *extimus*. The latter restricts *extimus* to the south bank without, however, even having seen any Amazonian specimens. As usual, the material in the Carnegie Museum fully endorses Mr. Todd's conclusions. The present subspecies is strikingly distinct.

S37. *TURDUS FUMIGATUS FUMIGATUS* (Lichtenstein)

Type locality: southeastern Brazil

Pará region common (all collectors); Caviana Island (Brodkorb); Mexiana Island (all collectors); Rio Tocantins (Snethlage); Santarem (Chapman and Riker)

3 ♂ 2 ♀, Rio Acará, Acará

2 ♂, Rio Tapajoz, Pinhy

1 ♂, Obidos (Carnegie Mus.)

1 ♂ 3 ♀, Santarem (do.)

2 ♂ 4 ♀, Rio Tapajoz, left bank (do.)

Replaced by *hauxwelli* Lawrence from the Rio Madeira westward.

S38. *TURDUS AMAUROCHALINUS* Cabanis

Type locality: Brazil

1 ♂, Pará (Snethlage)

This is a common thrush south of our area, ranging north along the coast of Maranhão. One wonders if the record from Pará is really authentic.

S39. *TURDUS LEUCOMELAS EPHIPPIALIS* Sclater

Type locality: Bogatá

Amapá, Monte Alegre, Rio Jamundá (Snethlage)

S40. *TURDUS LEUCOMELAS ALBIVENTER* Spix

Type locality: Pará

Common, Mexiana, Marajo, Pará region (all collector); Caviana Island (Brodkorb); Rio Tapajoz (Snethlage)

1 ♂ 1 ♀, Pará, Bosque

11 ♂ 8 ♀, Rio Tapajoz, various localities

1 ♀, Benevides (Carnegie Mus.)

2 ♂ 3 ♀, Santarem (do.)

Family SYLVIIDÆ

S41. *POLIOPTILA PARAENSIS* Todd, 1937

Type locality: Benevides, Pará, Brazil

1 ♂ nearly adult (possibly a ♀), type locality

This interesting little bird will probably prove to be related to the *guianensis-schistaceigula* complex when further specimens turn up. Above all, positively adult males are badly needed.

842. *POLIOPTILA PLUMBEA PLUMBEA* (Gmelin)

Type locality: Surinam

Pará region (Hellmayr, Snethlage, Stone); Marajo Island (Hellmayr, Snethlage); Santarem (Hellmayr); Monte Alegre (Snethlage)

- 1 ♂, Pará, Val-de-Caes
- 3 ♂ 1 ♀, near Obidos
- 1 ♂, Rio Tapajoz, Pinhy
- 7 ♂ 2 ♀, Obidos (Carnegie Mus.)
- 1 ♀, Benevides (do.)
- 17 ♂ 9 ♀, Santarem (do.)

843. *RAMPHOCAENUS MELANURUS AUSTERUS* Zimmer, 1937

Type locality: Pedral, Baião, Rio Tocantins, Brazil

Pará region, numerous records and localities (Sclater, Hellmayr, Snethlage, Stone); Rio Tocantins, east bank (Snethlage)

- 2 ♂, Benevides (Carnegie Mus.)

844. *RAMPHOCAENUS MELANURUS ALBIVENTRIS* Sclater

Type locality: Surinam

Rio Jary, S. Antonio de Cachoeira (Snethlage); Faro (Zimmer)

845. *RAMPHOCAENUS MELANURUS AMAZONUM* Hellmayr

Type locality: Teffe, Rio Solimoës, Brazil

Common from the west bank of the Rio Tocantins westward (Snethlage, Zimmer)

- 25 ♂ 6 ♀, Rio Tapajoz, various localities, east bank.
- 10 ♂ 1 ♀, Santarem (Carnegie Mus.)
- 5 ♂ 3 ♀, Rio Tapajoz, both banks (do.)

Family MOTACILLIDAE

846. *ANTHUS LUTESCENS LUTESCENS* Pucheran

Type locality: Rio de Janeiro, Brazil

Pará (Snethlage, Stone); Benevides, Quati-puru (Snethlage); Mexiana Island (Wallace, Hellmayr); Marajo Island (Hellmayr, Snethlage); Rio Maecuru (Snethlage); Santarem (Chapman and Riker)

- 7 ♂ 7 ♀, Lago Grande, west of Rio Tapajoz
- 20 ♂ 8 ♀, Santarem (Carnegie Mus.)

Family CYCLARHIDAE

847. CYCLARHIS GUJANENSIS GUJANENSIS (Gmelin)

Type locality: French Guiana

Pará region and entire area south of the Amazon to the Rio Tapajoz (numerous records, all collectors); Monte Alegre (Snethlage)

- 1 ♀, Pará, Bosque
- 7 ♂ 5 ♀, Rio Tapajoz, various localities, east bank.
- 2 ♂ 1 ♀, Obidos (Carnegie Mus.)
- 2 ♂ 1 ♀, Benevides (do.)
- 2 ♂ 3 ♀, Santarem (do.)
- 2 ♂ 1 ♀, Rio Tapajoz, Aveiros, Miritituba (do.)

Family VIREOLANIIDAE

848. SMARAGDOLANIUS LEUCOTIS LEUCOTIS (Swainson)

Type locality: "Africa"

- 1 ♂, S. Antonio de Cachoeira, Rio Jary (Snethlage)

849. SMARAGDOLANIUS PULCHELLUS SIMPLEX (Berlepsch)

Type locality: Santa Elena, Rio Jamauchim, Brazil.

Recorded only from the type locality, Boim on the Rio Tapajoz, and Arumathéua on the Rio Tocantins (Snethlage) in our area, and Barão Melgaço, northern Matto Gross (Naumburg)

- 2 ♂ 1 ♀, Santarem (Carnegie Mus.)
- 1 ♂ 1 ♀, Rio Tapajoz, Bella Vista, Miritituba (do.)

There is as yet no record of this species between the Tapajoz and the Rio Purus. Five specimens from this river in the Carnegie Museum differ from *bolivianus* (1 spec.) in being brighter greener olive, the cap more bluish, less slaty gray with more of a greenish tinge forward, and the throat and breast appear a brighter more golden yellow.

Family VIREONIDAE

850. VIREO CHIVI CHIVI (Vieillot)

Type locality: Paraguay

Santarem and Miritituba, Rio Tapajoz (Todd)

- 2 ♀, Rio Tapajoz, Pinhy and Caxiricatuba, June and July
- 2 ♂, Santarem, April 30, and May 12, 1919. (Carnegie Mus.)
- 1 ♂, Rio Tapajoz, Miritituba, February 23, 1920 (do.)

A migrant to our area from the south.

S51. *VIREO CHIVI VIVIDIOR* Hellmayr and Seilern

Type locality: Caparo, Trinidad

Localities on the Rio Tapajoz (Todd)

1 ♂, Rio Tapajoz, Pinhy, March 5, 1933

1 ♀, Rio Tapajoz, Tauary, November 21, 1932

A migrant to our area from the north.

S52. *VIREO CHIVI SOLIMOËNSIS* Todd

Type locality: São Paulo de Olivença, Rio Solimões

2 ♂, Pará, Val-de-Caes

27 ♂ 13 ♀, Rio Tapajoz, various localities, east bank

5 ♂ 7 ♀, Santarem (Carnegie Mus.)

5 ♂, Rio Tapajoz, both banks (do.)

There is hopeless disagreement at the moment on the proper treatment of this *Vireo* and its racial variation. (cf. Hellmayr, 1935, pp. 136-143, and Todd, Auk, 1931, pp. 407-412). Hellmayr and Zimmer claim that *chivi* is conspecific with the *virescens* group. Todd not only denies this, but divides *chivi* into two species, all the races of *chivi* from the Amazon Valley northward being a second species, the earliest name for which is *caucac*. Mr. Todd's position is based on very fine series of specimens of every proposed form, and the discovery of *chivi* and other northern subspecies at the same place and season in Amazonia. Hellmayr has fortunately examined some of these critical specimens, and while admitting the justification of Mr. Todd's identifications, suggests (1) that there is a higher degree of individual variation or (2) that the examples of *chivi* might be migrants. Mr. Todd's review leaves the resident bird (if any) of lower Amazonia unsettled, but Dr. Hellmayr maintains that all specimens seen by him east to Pará cannot be separated from *solimoënsis*.

The very large series before us throw some new light on these questions. The very great majority of the birds are *solimoënsis* both in color and size, and as these are the breeding birds, it is *solimoënsis* which is the resident race just as Dr. Hellmayr claims. On the other hand, seven specimens are readily picked out of this series by virtue of their much larger size. Two in their brighter and lighter green color are clearly *vividior*. Five others are strikingly grayer and duller, and are inseparable from typical specimens of *chivi*. These birds consequently endorse Todd's conclusions and also Dr. Hellmayr's admission that certain specimens are indeed strikingly like *chivi*. We disagree

most emphatically, however, in the identification of Todd's specimens of *vidior* from the Lower Amazon, and refer all of them to *solimoënsis*.

We see no occasion for adopting the extreme conclusions of either author. We cannot agree in reducing *chiri* to the *virescens* "formenkreis," but see no necessity for splitting *chiri* into two species for the reasons alleged above. Field experience has now overwhelmingly demonstrated that *flavoviridis* and *calidris*, the other two tropical species of this group, are highly migratory. It is, we think, a much more common sense position to regard *solimoënsis* as the resident race, to infer that *vidior* is migratory from the north, and *chiri* migratory from the south. The new evidence before us, on Mr. Todd's reasoning, would now require *chiri* to be split into *three instead of two* species, which seems to us a patent absurdity.

The type series of *griseola* Todd seems separable to us on the character claimed, though Hellmayr is doubtful if *griseola* and *solimoënsis* are really separable. He has also examined Todd's 2 Obidos specimens of *griseola* and cannot distinguish them from *solimoënsis*; neither can we.

Needless to say, it is quite impossible to allocate any of the older records and references subspecifically without reexamination. The species is recorded abundantly by all collectors from every part of our area except Marajo Island.

853. VIREO CALIDRIS BARBATULA (Cabanis)

Type locality: Cuba

1 ♀, Rio Tapajoz, Caxiricatuba, July 31, 1932

1 ♀, Obidos, January 20, 1921 (Carnegie Mus.)

1 ♂, Rio Tapajoz, Villa Braga, December 10, 1919 (do.)

We wish to call attention to the surprising date of capture (July) of one specimen. It is in exceedingly worn and frowsy plumage, but is readily identified as *barbatula* rather than typical *calidris* by the much smaller bill. The color characters so obvious in fresh birds are completely obscured in this specimen, but it cannot be *barbadensis*, as the superciliary is buffy, not grayish.

Winter specimens of this West Indian vireo are exceedingly few. Recently collected specimens in American Museums from eastern Panama and the north coasts of Colombia and Venezuela have proved to be *barbatula*. There are a few older winter records from South America in European museums, but these specimens have never been critically determined subspecifically, with the single exception of

Natterer's specimen from Borba on the Rio Madeira, which Hellmayr shows is straight *calidris*. (Novit. Zool., 1910, p. 268). This, therefore, is the first definite record of *barbatula* from Brazil.

854. HYLOPHILUS THORACICUS GRISEIVENTRIS

Berlepsch & Hartert

Type locality: Suapure, Caura River, Venezuela
Obidos (Hellmayr, 1935)

1 ♂, Obidos (Carnegie Mus.)

855. HYLOPHILUS SEMICINEREUS SEMICINEREUS Sclater & Salvin

Type locality: Pará, Brazil

Common on the south bank of the Amazon from the Pará region westward (all collectors)

9 ♂ 11 ♀, Rio Tapajoz, various localities, east bank

5 ♂ 3 ♀, Benevides (Carnegie Mus.)

6 ♂, Rio Tapajoz, both banks, (do.)

856. HYLOPHILUS SEMICINEREUS VIRIDICEPS (Todd)

Type locality: Pied Saut, French Guiana

Rio Jary, Obidos, Rio Jamundá (Snethlage and Todd)

4 ♂, Obidos (Carnegie Mus.)

857. HYLOPHILUS PECTORALIS Sclater

Type locality: Villa Bella de Matto Grosso

Mexiana Island (Hagmann, Hellmayr); Marajo Island, Quati-puru, Rio Tocantins, Arumanduba, Monte Alegre (Snethlage)

1 ♂ 1 ♀, Rio Tapajoz, Santarem

5 ♂ 3 ♀, (do.) (do.) (Carnegie Mus.)

858. HYLOPHILUS MUSCICAPINUS MUSCICAPINUS Sclater & Salvin

Type locality: Oyapock, French Guiana

Rio Jary and Obidos (Snethlage)

14 ♂ 3 ♀, Obidos (Carnegie Mus.)

S59. *HYLOPHILUS MUSCICAPINUS GRISEIFRONS* (Snethlage)

Type locality: Villa Braga, Rio Tapajoz

Otherwise known only from Boim (Snethlage), the Rio Madeira and northern Matto Grosso

6 ♂ 3 ♀, Rio Tapajoz, Villa Braga, and Apaçy (Carnegie Mus.)

S60. *HYLOPHILUS BRUNNEICEPS INORNATUS* (Snethlage)

Type locality: Cametá, Rio Tocantins

Also Rio Jamauchim (Snethlage) and Rio Tapajoz (Todd)

1 ♂, Rio Tapajoz, Caxiricatuba

4 ♂ 1 ♀, Santarem (Carnegie Mus.)

5 ♂ 2 ♀, Rio Tapajoz, Miritituba (do.)

S61. *HYLOPHILUS HYPOXANTHUS ALBIGULA* (Chapman)

Type locality: Santa-Julia, Rio Iriri, Rio Xingú

Rio Xingú (Snethlage)

S62. *HYLOPHILUS LUTEIFRONS* Scater

Type locality: Bartica Grove, British Guiana

San Antonio de Cachoeira, Rio Jary (Snethlage)

1 ♂, Obidos (Carnegie Mus.)

S63. *HYLOPHILUS RUBRIFRONS RUBRIFRONS* Scater and Salvin

Type locality: Pará

Pará, (Natterer, Snethlage, Stone); other localities near Pará and Peixe-Boi (Snethlage)

3 ♂ 2 ♀, Benevides (Carnegie Mus.)

This race is probably restricted to the area east of the Rio Tocantins.

S64. *HYLOPHILUS RUBRIFRONS LUTESCENS* (Snethlage)

Type locality: Boim, Rio Tapajoz

Rio Xingú, Victoria and Rio Tapajoz, Villa Braga (Snethlage)

1 ♂ 1 ♀, Rio Tapajoz, Pataua and Tauary

6 ♂ 1 ♀, Rio Tapajoz, left bank (Carnegie Mus.)

9 ♂ 1 ♀, (do.) , right bank and Santarem (do.)

The series from the right bank of the Tapajoz is intermediate. Above, these birds are nearer *lutescens*, but they have the distinctly brownish throat and breast of *rubrifrons*.

Family COEREBIDAE

865. CHLOROPHANES SPIZA SPIZA (Linnæus)

Type locality: Surinam

Peixe-Boi (Hellmayr); Utinga (Beebe); Pará (Stone); Pará region, Rio Tocantins, Rio Jamauchim (Snethlage)

3 ♂, Pará, Bosque

4 ♂, Obidos (Carnegie Mus.)

6 ♂ 1 ♀, Benevides (do.)

1 ♂, Rio Tapajoz, Villa Braga (do.)

866. CYANERPES CYANEUS CYANEUS (Linnæus)

Type locality: Surinam

Pará region, abundant (all collectors); Rio Tocantins, Monte Alegre, Obidos (Snethlage)

21 ♂ 14 ♀, Rio Tapajoz, various localities, east bank

1 ♂ 2 ♀, Obidos (Carnegie Mus.)

3 ♂ 1 ♀, Benevides (do.)

5 ♂ 4 ♀, Santarem (do.)

1 ♂ 1 ♀, Rio Tapajoz (do.)

867. CYANERPES CAERULEUS CAERULEUS (Linnæus)

Type locality: Surinam

Common throughout our area (all collectors), but unrecorded from Marajo and Mexiana Islands

11 ♂ 5 ♀, Pará, Bosque, and Val-de-Caes

6 ♂, Benevides (Carnegie Mus.)

1 ♂ 2 ♀, Santarem (do.)

2 ♂ 2 ♀, Rio Tapajoz, Villa Braga (do.)

868. *DACNIS CAYANA CAYANA* (Linnaeus)

Type locality: Cayenne

Common almost throughout our area (all collectors), but as yet unrecorded from Mexiana Island, although collected on Marajo

- 1 ♂ 3 ♀, Pará, Bosque
- 21 ♂ 8 ♀, Rio Tapajoz, various localities, both banks
- 1 ♂, Obidos (Carnegie Mus.)
- 4 ♂ 1 ♀, Benevides (do.)
- 3 ♂ 4 ♀, Santarem (do.)
- 4 ♂ 2 ♀, Rio Tapajoz (do.)

869. *DACNIS LINEATA LINEATA* (Gmelin)

Type locality: Cayenne

Pará (Stone); Igarapé-Assu, Benevides (Hellmayr); Pará, Rio Acará (Snethlage)

- 1 ♂, Obidos (Carnegie Mus.)

This species is better known as *angelica* Bonaparte. It is certainly curious that it is unrecorded between Pará and the Rio Madeira.

870. *DACNIS FLAVIVENTER* Lafresnaye and D'Orbigny

Type locality: Yuracares, Bolivia

Rio Iriri, Rio Tapajoz, Rio Jamauchim (Snethlage)

- 1 ♂, label lost, but presumably Rio Tapajoz
- 1 ♂ 1 ♀, Santarem (Carnegie Mus.)
- 3 ♂ 1 ♀, Rio Tapajoz, Goyana Island, Apaçy (do.)

871. *COEREBA LUTEOLA CHLOROPYGA* (Cabanis)

Type locality: Bahia

Maracá, Rio Jary, Monte Alegre, Rio Jamauchim (Snethlage) and Caviana Island (Brodkorb) all as *minima* Bonaparte from Cayenne; abundant throughout our area south of the Amazon (all collectors.)

- 7 ♂ 4 ♀, Pará, Bosque and Val-de-Caes
- 11 ♂ 7 ♀ 2 ?, Rio Tapajoz, various localities, east bank
- 2 ♂ 1 ♀, Obidos (Carnegie Mus.)
- 1 ♂ 2 ♀, Benevides (do.)
- 1 ♂ 2 ♀, Santarem (do.)
- 3 ♂, Rio Tapajoz (do.)

This fine series averages slightly smaller and darker slate, less brownish above, than birds from eastern and southeastern Brazil. They thus slightly approach the Guiana race. As Hellmayr has duly noted, this bird is exceedingly variable individually, and we agree that there is really no need for more than two races in the area outlined above. It is merely unfortunate, as so often happens, that Bahia topotypes of *chloropyga* are not typical of the southern extreme. Obidos birds are inseparable, and show no approach to *minima*, to which Hellmayr assigns them.

872. ATELEODACNIS SPECIOSA SPECIOSA (Temminck)

Type locality: Rio de Janeiro

Marajo Island (Snethlage), the northeastern limit

873. ATELEODACNIS SPECIOSA AMAZONUM Hellmayr

Type locality: Tarapato, northern Peru

Ereré, Serra de Paituna, Rio Tocantins, Rio Tapajoz (Snethlage)

2 ♂ 1 ♀, Obidos (Carnegie Mus.)

Snethlage has recorded her birds as *Dacnis speciosa* and *D. analis* Lafr. and d'Orb. It remains to be determined whether some or all of these records really belong to *amazonum* or not.

874. ATELEODACNIS BICOLOR BICOLOR (Vieillot)

Type locality; Cayenne

Cajutuba (Natterer); Mexiana Island (Hagmann); Pará, Marajo Island, Aquiri, Arumanduba (Snethlage)

3 ♂ imm., near Obidos

5 ♂ 2 ♀, Obidos (Carnegie Mus.)

8 ♂ 4 ♀, Santarem (do.)

875. ATELEODACNIS BICOLOR MINOR Hellmayr

Type locality: Rio Madeira, right bank below Rio Mahisi

Santarem (Chapman and Riker); Villa Bella Imperatriz (Zimmer)

Family COMPSOTHTYPIIDAE

876. *DENDROICA AESTIVA AESTIVA* (Gmelin)

Type locality: Canada

Chaves, Marajo Island, 1 ♂ (Snethlage)

877. *GEOTHLYPIS AEQUINOCTIALIS AEQUINOCTIALIS* (Gmelin)

Type locality: Cayenne

Pará, (Stone); Caviana Island (Brodkorb); Mexiana Island (Wallace, Haggmann, Hellmayr, Snethlage); S. Antonio do Prata and Rio Xingú (Snethlage)

3 ♂, Santarem (Carnegie Mus.)

2 ♂ 1 ♀, Obidos (do.)

878. *GRANATELLUS PELZELNI PELZELNI* Sclater

Type locality: Destacamento de Ribeirao, Rio Madeira

Santarem (Hellmayr); Rio Tocantins, Rio Tapajoz and Rio Jary (Snethlage).

4 ♂ 2 ♀, Rio Tapajoz, both banks

2 ♂ 2 ♀, (do.) , (do.) (Carnegie Mus.)

1 ♂, Santarem (do.)

879. *GRANATELLUS PELZELNI PARAENSIS* Rothchild

Type locality: S. Antonio do Prata, Pará

Also Santa Maria de San Miguel, Rio Guamá (Snethlage)

1 ♀, Rio Acará, Acará

880. *BASILEUTERUS RIVULARIS MESOLEUCUS* Sclater

Type locality: Demerara, British Guiana

Rio Muraiteua (Stone); Pará, Peixe-Boi, San Antonio do Prata (Snethlage);

Rio Tapajoz, Villa Braga, and Colonia de Mojuy (Todd)

1 ♂ 1 ♀, Rio Tapajoz, east bank

1 ♀, Benevides (Carnegie Mus.)

1 ♂ 1 ♀, Santarem (do.)

1 ♂, Villa Braga (do.)

Family ICTERIDAE

881. GYMNOSTINOPS BIFASCIATUS (Spix)

Type locality: Maranhao and Pará

Pará (Natterer, Spix, Snethlage); Peixe-Boi (Hellmayr); Arumatheua, Rio Tocantins (Snethlage)

1 ♂ ad., "Lower Amazons"

882. GYMNOSTINOPS NEIVÆ Snethlage

Type locality: islands in Rio Iriri, a tributary on the west bank of the Rio Xingú

Santarem (Allen)

3 ♀, Santarem (Carnegie Mus.)

This remarkable bird is almost half way between the chestnut and blackish *bifasciatus* and the chestnut and yellow *yuracares*. Further specimens of this genus from the south bank of the Amazon are badly needed. Hellmayr has already commented on the greener, less yellow coloration of Rio Madeira specimens of *yuracares* which suggests the first step in an approach to *neivæ*.

883. OSTINOPS DECUMANUS DECUMANUS (Pallas)

Type locality: Surinam

Rio Muria (Natterer); Rio Capim (Goeldi); Marajo Island, Amapá, Cunany, Rio Tocantins (Snethlage); Santarem (Chapman and Riker)

6 ♂ 2 ♀, Rio Tapajoz, east bank

1 ♀, Obidos (Carnegie Mus.)

1 ♂ 1 ♀, Santarem (do.)

There would seem to be a distinct decrease in size southward in eastern South America. Measuring only adult males and females, we get the following wing lengths—

Surinam	1 ♂ 141	4 ♀ 74-80
Rio Tapajoz	5 ♂ 124-133	2 ♀ 60-65
Bahia		1 ♀ 66

This difference could perhaps receive nomenclatural recognition were size not equally variable in other parts of the range of the species. Birds from upper Amazonian Brazil and east Ecuador are fully as large

as Surinam specimens. Birds from western Colombia and Panama, however, are small again like Brazilian birds, and there are no color differences if birds of similar age are compared. The youngest birds are more chestnut, less blackish above; the next stage, particularly in males, is dull blackish with a short crest, and only fully adult males are glossy black, with an elongated crest, and radically larger than females.

884. *OSTINOPS VIRIDIS VIRIDIS* (P. L. S. Müller)

Type locality: Cayenne

Pará (Natterer, Wallace, Layard); Caviana Island (Brodkorb); Peixe-Boi, San Antonio do Prata (Hellmayr); Rio Capim (Goeldi); Capanema, Rio Guamá, Rio Tocantins (Snethlage)

3 ♂, Rio Tapajoz, Boim

1 ♀, Obidos (Carnegie Mus.)

1 ♂, Santarem (do.)

1 ♂ 2 ♀, Rio Tapajoz, Villa Braga (do.)

These birds are much nearer typical *viridis* than the very distinct *flavescens* Bangs and Penard of the Peruvian Amazons. They differ from a series from French and Dutch Guiana, however, in being distinctly yellower on throat and chest, thus showing a slight approach to *flavescens*.

885. *CACICUS CELA* (Linnæus)

Type locality: Guiana

Common throughout our area (all collectors)

5 ♂ 5 ♂, Pará, Bosque and Val-de-Caes

2 ♂ 1 ♀, Rio Tocantins, Cameta

1 ♂ 1 ♀, Rio Xingú, Tapará and Porto do Moz

14 ♂ 11 ♀, Rio Tapajoz, east bank

1 ♂, Obidos (Carnegie Mus.)

1 ♂, Santarem (do.)

1 ♂ 1 ♀, Rio Tapajoz, Apacy

886. *CACICUS HAEMORRHOUS HAEMORRHOUS* (Linnæus)

Type locality: Brazil in error, = Cayenne

Pará region, common (all collectors); no records from Marajo or Mexiana Islands; Villa Braga, Rio Tapajoz (Snethlage)

3 ♂ 2 ♀, Rio Tapajoz, Tauary and Boim

1 ♀, Benevides (Carnegie Mus.)

2 ♂, Santarem (do.)

7 ♂ 2 ♀, Rio Tapajoz, Villa Braga (do.)

887. *ARCHIPLANUS SOLITARIUS* (Vieillot)

Type locality: Paraguay

Marajo Island (Snethlage); Caviana Island (Brodkorb); Arumanduba, Monte Alegre, Rio Jamundá (Snethlage); Santarem (Chapman and Riker)

2 ♂ 1 ♀, near Obidos

1 ♂, Rio Tapajoz, Santarem

7 ♂ 4 ♀, Santarem (Carnegie Mus.)

This Cacique occurs in our area, only where there is some open country. It will unquestionably be found locally elsewhere.

888. *PSOMOCOLAX ORYZIVORUS ORYZIVORUS* (Gmelin)

Type locality: Cayenne

Pará (Natterer, Wallace, Stone); S. Antonio do Prata, Ipitinga (Hellmayr); Rio Capim (Goeldi); Rio Guamá, and Monte Alegre (Snethlage); Santarem (Chapman and Riker)

4 ♂ 1 ♀, Rio Tapajoz, east bank

2 ♀, Santarem (Carnegie Mus.)

889. *MOLOTHRUS BONARIENSIS RIPARIUS* Griscom and Greenway, 1937

Type locality: Pinhy, Rio Tapajoz, Brazil

Cajutuba (Natterer); Mexiana Island (Wallace); Marajo Island (Hellmayr); Quati-puru, Amapá, Monte Alegre, Cussary, Rio Tapajoz (Snethlage); Santarem (Pelzel, Chapman and Riker, Hellmayr)

13 ♂ 3 ♀, Rio Tapajoz, various localities, east bank

1 ♀, Lago Grande, west of Rio Tapajoz

1 ♂, Obidos (Carnegie Mus.)

5 ♂ 3 ♀, Santarem (do.)

2 ♂ 1 ♀, Rio Tapajoz, Goyana Island (do.)

It seems to us clearly proved that lower Amazon Valley Cowbirds are neither typical *bonariensis* nor the dwarf *minimus* Delmas from Tobago, Trinidad, and the Guianas. Both these races have been ascribed to our area. The females are not dimorphic, apparently, as in *bonariensis*, and there are perfectly good size characters in addition, though *riparius* is intermediate in this respect.

890. *AGELAIUS CYANOPUS* Vieillot

Type locality: Paraguay

Arumanduba (Snethlage); the extreme northern limit

891. *AGELAIUS ICTEROCEPHALUS ICTEROCEPHALUS* (Linnæus)

Type locality: Cayenne

Amapá, Arumanduba, Monte Alegre, Marajo Island (Snethlage); Pará (Stone); Santarem (Chapman and Riker)

12 ♂ 8 ♀, Santarem (Carnegie Mus.)

892. *AGELAIUS RUFICAPILLUS FRONTALIS* Vieillot

Type locality: Cayenne

Mexiana Island (Hagmann); Rio Guamá (Snethlage)

893. *LEISTES MILITARIS MILITARIS* (Linnæus)

Type locality: Surinam

Common in marshes and open country throughout our area (all collectors).

8 ♂ 3 ♀, Rio Tapajoz, localities on both banks

2 ♂, Santarem (Carnegie Mus.)

1 ♂, Itaituba, Rio Tapajoz (do.)

894. *GYMNOMYSTAX MEXICANUS* (Linnæus)

Type locality: Cayenne

Recorded from practically all parts of our area, where marshes and open country occur

1 ♂ 2 ♀, Lago Grande

9 ♂ 4 ♀, Rio Tapajoz, both banks

1 ♀, Obidos (Carnegie Mus.)

1 ♂ 2 ♀, Santarem (do.)

895. *STURNELLA MAGNA* subspecies

Savannahs of Rio Tocantins (Snethlage, 1926); Marajo Island (Brodkorb)

American ornithologists have generally overlooked Snethlage's record of the genus *Sturnella* ranging south to Lower Amazonia. She reported her birds as *meridionalis* Sclater, which is, of course, out of the question. On the other hand, Brodkorb identified his specimens as *praticola* Chubb of the lowlands of British Guiana, certainly the proper allocation until a series proves them separable. The completely isolated birds on the savannahs of the Tocantins might be something else again.

896. *ICTERUS CAYANENSIS CAYANENSIS* (Linnæus)

Type locality: Cayenne

Bemfica, Ipitanga, (Hellmayr); Castanhal (Stone); Pará and Marajo Island (Wallace); Pará, Providencia, San Antonio do Prata, Rio Tocantins (Snethlage)

- 1 ♂, Rio Tapajoz, Boim
- 1 ♂ 1 ♀, Rio Tapajoz, Santarem
- 1 ♀, Obidos (Carnegie Mus.)
- 1 ♂ 2 ♀, Santarem (do.)
- 1 ♂, Rio Tapajoz, Miritituba (do.)

897. *ICTERUS CROCONOTUS CROCONOTUS* (Wagler)

Type locality: Guiana

Monte Alegre, Rio Maecuru, Rio Jamunda (Snethlage); Santarem (Chapman and Riker)

- 2 ♂, Lago Grande
- 1 ♂, Rio Tapajoz, Santarem
- 2 ♀, near Obidos
- 3 ♂ 1 ♀, Obidos (Carnegie Mus.)
- 4 ♂ 4 ♀, Santarem (do.)

Family TERSINIDAE

898. *TERSINA VIRIDIS VIRIDIS* (Illiger)

Type locality: Brazil

- 1 ♂ juv., Pará (Snethlage)

This record requires confirmation. The Swallow Tanager is otherwise unknown between the Rio Madeira (*occidentalis*) and the region between Bahia and Rio de Janeiro.

Family THRAUPIDAE

899. *TANAGRA MUSICA INTERMEDIA* (Chubb)

Type locality: Roraima, British Guiana

- 1 ♂ juv., Monte Alegre (Snethlage)

This is the species more familiarly known as *nigricollis* Sclater (*nec* Vieillot) or *cyanoccephala* Vieillot (*nec* P.L.S. Müller). This blue-capped

species seems to have an interrupted distribution, the Lower Amazon Valley being one of the areas where it is almost wholly absent. South of our area the race *aureata* (Vieillot) is common from southern Brazil southward. If the Antillean *musica* is not regarded as conspecific, the specific name of the South American bird is, of course, *aureata*.

900. TANAGRA CHLOROTICA CHLOROTICA (Linnæus)

Type locality: Cayenne .

Marajo Island (Hellmayr, Snethlage); Rio Iriri, Rio Tapajoz (Snethlage); Santarem (Chapman and Riker); Rio Tapajoz, Itaituba (Hellmayr); Monte Alegre (Snethlage)

3 ♂ 4 ♀, Rio Tapajoz, east bank

8 ♂ 6 ♀, Obidos (Carnegie Mus.)

2 ♂ 1 ♀, Santarem (do.)

4 ♂ 1 ♀, Rio Tapajoz (do.)

This species has a wide South American range, and is now divided into at least four races. All authors agree that the present one ranges south to the north bank of the Amazon valley. Southward we have the very poorly characterized *violaccicollis* (Cabanis), a group of variants too near *serrirostris* (Lafresnaye and d'Orbigny). It is still possible that the Amazon River may prove to be the best dividing line; in which case all specimens from the south bank would be called either *violaccicollis* or *serrirostris*, according to the author's taste in "splitting."

901. TANAGRA XANTHOGASTER subsp.

Rio Jamauchim (Snethlage).

2 ♂, Santarem (Carnegie Mus.)

Compare Hellmayr's remarks on Amazonian records of this species (Birds of Americas, pt. 1, Oct., 1936, p. 23, footnote).

902. TANAGRA MINUTA MELLEA Bangs and Penard

Type locality: Iquitos, northeastern Peru

Souza (Hellmayr); Providencia, Rio Tocantins, Rio Tapajoz (Snethlage)

1 ♂, Rio Tapajoz, Caxiricatuba

4 ♂, Obidos (Carnegie Mus.)

2 ♂ 2 ♀, Benevides (do.)

1 ♂, Santarem (do.)

1 ♀, Rio Tapajoz, Aveiros (do.)

This species is widely distributed in northern South America and southern Central America, but is little known in the Amazon valley. Typical *minuta* has been recorded from Manaos; and Obidos birds might belong here too.

903. *TANAGRA VIOLACEA VIOLACEA* (Linnæus)

Type locality: "Surinam"

Common throughout our area (all collectors), but not as yet recorded from Mexiana Island

- 2 ♂, Pará, Val-de-Caes
- 13 ♂, 4 ♀, Rio Tapajoz, both banks
- 2 ♂ 1 ♀, Benevides (Carnegie Mus.)
- 4 ♂ 1 ♀, Santarem (do.)
- 2 ♂ 2 ♀, Rio Tapajoz (do.)

904. *TANAGRA MELANURA* (Sclater)

Type locality: Barra do Rio Negro, Brazil

- 1 ♂, near Obidos, and 1 ♂, do. (Carnegie Mus.)
- 4 ♂, Rio Tapajoz, east bank

Apparently not previously recorded east of the Rio Madeira.

905. *TANAGRA RUFIVENTRIS RUFIVENTRIS* (Vieillot)

Type locality: Brazil

- 1 ♂, Boa Vista, Rio Xingú (Snethlage)
- 1 ♂, Rio Tapajoz, Villa Braga (Carnegie Mus.)

A species of upper Amazonia, otherwise unreported east of the Rio Madeira.

906. *TANAGRA CAYENNENSIS* (Gmelin)

Type locality: Cayenne

Pará region, common (all collectors); Rio Jary (Snethlage)

- 1 ♂ 1 ♀, Pará, Bosque and Val-de-Caes
- 1 ♀, Rio Acará, Acará
- 1 ♂, Obidos (Carnegie Mus.)
- 3 ♂ 1 ♀, Benevides (do.)

This well known species reaches its extreme southern limit in northern Maranhão, just south of our area.

907. TANAGRA CHRYSOPASTA subsp.

- 1 ♀, St. Antonio de Cachoeira, Rio Jary (Snethlage)
 1 ♂ 1 ♀, Obidos (Carnegie Mus.)
 1 ♂, Rio Tapajoz, Villa Braga (do.)

The two specimens from Obidos are minutely smaller than upper Amazonian birds, but show no suggestion of the very marked color characters of *nitida* Penard. It will be recalled that the type is the only definite record of this species in the Guianas. In the Carnegie Museum there is a male imm. from Pied Saut, French Guiana which also shows no real approach to *nitida*. It is apparent that *nitida* is one of the highly local coastal races in Surinam; this furnishes additional evidence that the "Guianas" are by no means an integral geographic unit. Typical *chrysopasta* is definitely recorded as far east as the Rio Madeira.

908. TANAGRELLA VELIA VELIA (Linnæus)

Type locality: Surinam

- 1 ♀, Obidos (Carnegie Mus.)

Not previously recorded so far south.

909. TANAGRELLA VELIA SIGNATA Hellmayr

Type locality: Pará

Pará (Layard, Hellmayr, Snethlage, Stone); Souza (Hellmayr); Providencia, Peixe-Boi, Rio Macryubim (Snethlage)

- 1 ♂ 1 ♀, Benevides (Carnegie Mus.)

This genus is lacking in Lower Amazonia between Pará and the Rio Purus, where *T. callophrys* has been collected.

910. TANGARA CHILENSIS CHILENSIS (Vigors)

Type locality: Bolivia

- 2 ♂, Rio Tapajoz, Villa Braga (Carnegie Mus.)

The northeastern limit of this species, previously reported from Calamá, Rio Madeira.

911. *TANGARA PUNCTATA PUNCTATA* (Linnæus)

Type locality: Surinam

Pará region, numerous localities (Hellmayr, Snethlage); Faro, Rio Jamundá (Snethlage)

3 ♀, Obidos (Carnegie Mus.)

2 ♂ 4 ♀, Benevides (do.)

1 ♂, Rio Tapajoz, Villa Braga (do.)

912. *TANGARA VARIA* (P.L.S. Müller)

Type locality: Cayenne

1 ♀, Villa Braga, and 1 ♂, Miritituba, Rio Tapajoz (Snethlage and Hellmayr)

1 ♀, Villa Braga (Carnegie Mus.)

A rare species, otherwise not reported authentically from our area.

913. *TANGARA CAYANA CAYANA* (Linnæus)

Type locality: "Cajania"

Monte Alegre (Snethlage); Santarem (Chapman and Riker)

7 ♂ 3 ♀, 2 imm., Rio Tapajoz, Santarem

4 ♂ 12 ♀, Santarem (Carnegie Mus.)

We have elsewhere (1937) commented on the size variations of this species and the factor of *post mortem* color change.

914. *TANGARA CAYANA HUBERI* (Hellmayr)

Type locality: Marajo Island

Only known from Marajo Island (Hellmayr, Snethlage).

915. *TANGARA GYROLA ALBERTINAE* (Pelzeln)

Type locality: Salto de Girao, Rio Madeira

Igarapé- Assu, S. Antonio do Prata (Hellmayr); Peixe-Boi, Rio Tocantins, Rio Jamauchim (Snethlage)

1 ♂ 1 ♀, Pará, Benevides (ex Carnegie Mus.)

2 ♂ 2 ♀, Benevides (Carnegie Mus.)

916. *TANGARA MEXICANA MEXICANA* (Linnæus)

Type locality: Cayenne

Maracá and Monte Alegre (Snethlage)

2 ♂ 1 ♀, near Obidos

2 ♂ 2 ♀, (do.) (Carnegie Mus.)

917. *TANGARA MEXICANA LATERALIS* Todd

Type locality: Rio Tapajoz, Apaçy

Common throughout the south side of the Amazon in our area, from the Pará region westward (all collectors)

12 ♂ 4 ♀, Rio Tapajoz, east bank

3 ♂, Benevides (Carnegie Mus.)¹

2 ♂ 1 ♀, Santarem (do.)

5 ♂ 2 ♀, Rio Tapajoz (do.)

We are at a loss to follow Hellmayr's strictures on this subspecies, which he synonymizes with *boliviana*. The 29 specimens in the type series of *lateralis* are readily told at a glance from 7 Bolivian skins.

918. *THRAUPIS EPISCOPUS EPISCOPUS* (Linnæus)

Type locality: Cayenne

Abundant throughout the area (all collectors)

1 ♂ 1 ♀, north bank of Amazon near Obidos

1 ♀, Pará Bosque

13 ♂ 7 ♀, Rio Tapajoz, east bank

1 ♂, Obidos (Carnegie Mus.)

2 ♂ 1 ♀, Benevides (do.)

3 ♂ 1 ♀, Santarem (do.)

1 ♂, Rio Tapajoz, Apaçy (do.)

This fine series differs from typical *episcopus* in having a larger and snowy white shoulder patch (rarely pale china blue), and a tendency to more extensive paler edgings to the wingcoverts, this slightly approaching *coelestis* (Spix) of upper Amazonia, which ranges east to the Rio Madeira.

919. *THRAUPIS PALMARUM MELANOPTERA* (Sclater)

Type locality: eastern Peru

Common throughout the area (all collectors), except Marajo and Mexiana Islands; Caviana Island (Brodkorb)

1 ♂ 3 ♀, Pará, Bosque and Val-de-Caes

1 ♂, Rio Acará, Acará

9 ♂ 5 ♀, Rio Tapajoz, east bank

1 ♀, Obidos (Carnegie Mus.)

2 ♀, Benevides (do.)

7 ♂ 2 ♀, Santarem (do.)

1 ♂ 1 ♀, Rio Tapajoz, Apaçy (do.)

This entire series is obviously nearer *melanoptera* than typical *palmarum*. We note, however, that Hellmayr refers "Pará" birds to *palmarum*.

920. *RAMPHOCELUS CARBO CARBO* (Pallas)

Type locality: Surinam

Abundant throughout our area (all collectors)

4 ♂ ad., 3 ♂ imm., 1 ♀, Pará, Bosque and Val-de-Caes

18 ♂ ad., 6 ♂ imm., 9 ♀ ad., 8 ♀ imm., Rio Tapajoz, east bank.

1 ♂ 1 ♀, Obidos (Carnegie Mus.)

1 ♂, Benevides (do.)

1 ♂, Santarem (do.)

4 ♂ 2 ♀, Rio Tapajoz (do.)

There is a rapid *post mortem* change in adult males of this species. Our fresh specimens are a brighter crimson on the throat and blacker on the abdomen than Guiana specimens, but old specimens from the Amazon are just like Guiana birds.

921. *RAMPHOCELUS NIGROGULARIS* subspecies

Monte Alegre, north bank, and Cussary, directly opposite on the south bank (Snethlage)

2 ♂, Obidos (Carnegie Mus.)

5 ♂ 2 ♀, Santarem (do.)

These nine specimens differ from nine topotypes from the Rio Solimões in having the black abdominal patch more restricted, the sides and flanks consequently more extensively scarlet and often clearly separating the black thighs from the other black areas; under tailcoverts far

more extensively scarlet, the black tips much narrower; female with the abdominal patch more restricted also. In our opinion we have here an eastern subspecies worthy of recognition. Our agreement with the Carnegie Museum, however, does not permit us to describe their material, and Mr. Todd writes that he does not care "to take a chance" on this Tanager.

922. *PIRANGA FLAVA SAIRA* (Spix)

Type locality: Brazil = Caxias, Piauhý
Serra de Eréré, Monte Alegre (Snethlage); Santarem (Hellmayr)

According to Hellmayr (1929, p. 283), specimens from the north bank are nearer *saira*, and not *macconnelli* Chubb of British Guiana, as might have been expected.

923. *HABIA RUBICA PERUVIANA* Taczanowski

Type locality: Yurimaguas, Peru
Rio Tapajoz, Boim, Villa Braga (Snethlage)
5 ♂, Rio Tapajoz, Villa Braga, etc. (Carnegie Mus.)

It would appear that *peruviana* ranges east to the left bank of the Tapajoz. We cannot distinguish these birds from series from the Rio Purus and Rio Solimões, and Dr. Hellmayr states that he cannot separate topotypes and birds from the Rio Madeira.

924. *HABIA RUBICA HESTERNA* Griscom and Greenway, 1937

Type locality: Pataua, right bank, Rio Tapajoz
Santarem (Chapman and Riker); Rio Jamauchim (Snethlage)
1 ♂ 5 ♀, Rio Tapajoz, right bank

A paler bird below, with a pinker, less scarlet throat.

925. *LANIO VERSICOLOR PARVUS* Berlepsch

Type locality: Santa Elena, Rio Jamauchim
Rio Tocantins (Snethlage); Santarem (Chapman and Riker)
6 ♂ 2 ♀, Rio Tapajoz, various places east bank
1 ♂, (do.) Miritituba (Carnegie Mus.)
3 ♂ 1 ♀, Santarem (do.)

The males measure 76–80 mm. in wing length, the majority being 80 mm. Hellmayr records *versicolor* from the Rio Madeira on the basis of a male measuring 82 mm.

926. *LANIO FULVUS* (Boddaert)

Type locality: Cayenne

St. Antonio de Cachoeira, Rio Jary

5 ♂ 1 ♀, Obidos (Carnegie Mus.)

927. *TACHYPHONUS RUFUS* (Boddaert)

Type locality: Cayenne

Pará region, common (all collectors); Rio Tocantins (Snethlage); Santarem (Chapman and Riker)

1 ♂ 3 ♀, Pará, Val-de-Caes

1 ♂ 2 ♀, Benevides (Carnegie Mus.)

1 ♂ 1 ♀, Rio Tapajoz, Miritituba (do.)

928. *TACHYPHONUS LUCTUOSUS LUCTUOSUS*

Lafresnaye & D'Orbigny

Type locality: Guarayos, Bolivia

Throughout the south bank from the Rio Tapajoz to the Rio Tocantins (Chapman and Riker, Snethlage, Hellmayr); Rio Guamá (Snethlage); throughout the north bank in our area (Snethlage, Hellmayr)

13 ♂ 5 ♀, Santarem (Carnegie Mus.)

1 ♂ 2 ♀, Obidos (do.)

4 ♂ 5 ♀, Rio Tapajoz (do.)

929. *TACHYPHONUS PHOENICIUS* Swainson

Type locality: East Peru

1 ♂, Boim, Rio Tapajoz (Snethlage)

930. *TACHYPHONUS CRISTATUS CRISTATUS* (Linnæus)

Type locality: "Cayania"

Rio Jamundá, Faro (Snethlage) and Obidos (Snethlage, Hellmayr)

4 ♂ 5 ♀, Obidos (Carnegie Mus.)

931. *TACHYPHONUS CRISTATUS BRUNNEUS* (Spix)

Type locality: Rio de Janeiro

Common throughout our area on the south bank of the Amazon east of the Tapajoz (all collectors), but unrecorded from Mexiana Island

- 1 ♀, Pará, Val-de-Caes
- 2 ♂ 1 ♀, Rio Acará, Acará
- 1 ♂ 1 ♀, Santarem
- 11 ♂ 5 ♀, Rio Tapajoz, east bank
- 1 ♂ 2 ♀, Benevides (Carnegie Mus.)
- 8 ♂ 9 ♀, Santarem (do.)
- 5 ♂ 2 ♀, Rio Tapajoz, Villa Braga (do.)
- 1 ♂, (do.) Miritituba (do.)

Hellmayr in the Cat. Birds America, Pt. IX, thinks that *madeirae* Hellmayr of the Rio Madeira might extend east to the left bank of the Rio Tapajoz and west to the Rio Solimoës. While we have seen no material from the Rio Madeira, an unexpected situation develops. Birds from the left bank of the Rio Tapajoz are indistinguishable from Santarem and Pará series. Twelve specimens from the Rio Purus and the Rio Solimoës are also absolutely inseparable from Lower Amazon birds and not a single one displays any of the characters ascribed to *madeirae*.

932. *TACHYPHONUS SURINAMUS SURINAMUS* (Linnæus)

Type locality: Surinam

- 1 ♂, Obidos (Snethlage)

This form ranges west to Manaos, and is replaced further west by *brevipēs* Lafresnaye (= *napensis* Lawrence).

933. *TACHYPHONUS SURINAMUS INSIGNIS* Hellmayr

Type locality: Bemfica, Pará

Pará region, common (all collectors); Rio Tocantins (Snethlage)

- 2 ♂ 2 ♀, Pará, Bosque
- 1 ♂ 1 ♀, Santarem
- 9 ♂ 4 ♀, Rio Tapajoz, east bank
- 4 ♂ 3 ♀, Benevides (Carnegie Mus.)
- 3 ♂ 2 ♀, Santarem (do.)
- 4 ♂ 1 ♀, Rio Tapajoz, both banks (do.)

This race ranges west to the Rio Madeira.

934. *EUCOMETIS PENICILLATA PENICILLATA* (Spix)

Type locality: Brazil

Pará region, common (numerous collectors); Mexiana Island (Wallace, Hagmann); Rio Tocantins, Cussary, Rio Jamundá (Snethlage)

- 1 ♀, near Obidos
- 1 ♂, Obidos (Carnegie Mus.)
- 2 ♂, Santarem (do.)
- 1 ♀, Benevides (do.)

Series from Cayenne and two birds from Obidos do not differ in either color or size from series from the Rio Solimoës and Rio Purus, the wing of males being 85–90; Santarem specimens, 89–91, 95; Benevides, 1 ♀ 95. It will be apparent, therefore, that birds near the city of Pará may prove to be a large local race.

935. *NEMOSIA PILEATA PILEATA* (Boddaert)

Type locality: Cayenne; Not Pará (Sclater and Salvin), fide Hellmayr Mexiana Island (Wallace, Hagmann, Hellmayr); Marajo Island (Hellmayr, Snethlage); Cajutuba (Natterer); Rio Tocantins, Arumanduba, Monte Alegre, Eréré (Snethlage)

- 1 ♂ 1 ♀, Rio Tapajoz, Pinhy
- 3 ♂ 3 ♀, Obidos (Carnegie Mus.)
- 2 ♂ 1 ♀, Santarem (do.)

936. *HEMITHRAUPIS GUIRA GUIRA* (Linnæus)

Type locality: northeastern Brazil = Pernambuco

Caviana Island (Brodkorb); Pará and Rio Capim (Stone); Pará, Rio Moju, Rio Tocantins (Snethlage)

- 3 ♂ 2 ♀, Pará, Val-de-Caes
- 1 ♂, Rio Tapajoz, Caxiricatuba
- 5 ♂ 2 ♀, Santarem (Carnegie Mus.)
- 2 ♂ 1 ♀, Rio Tapajoz, Miritituba (do.)

Not previously recorded west of the Tocantins. Series from the Rio Purus and Rio Solimoës in the Carnegie Museum are also *guira*.

937. *HEMITHRAUPIS GUIRA NIGRIGULA* (Boddaert)

Type locality: Cayenne

Arumanduba, Rio Maecuru, Rio Jamundá, Faro (Snethlage)

- 3 ♂, Obidos (Carnegie Mus.)

938. *HEMITHRAUPIS FLAVICOLLIS FLAVICOLLIS* (Vieillot)

Type locality: Cayenne

3 ♂ 6 ♀, Obidos (Carnegie Mus.)

For so widely distributed a bird, its absence from most of the Lower Amazon seems curious. The race *centralis* (Hellmayr) is recorded from the Rio Madeira.

939. *LAMPROSPIZA MELANOLEUCA* (Vieillot)

Type locality: Guiana

Pará (Natterer); Igarapé-Assu, Ipitinga, Benevides (Hellmayr); Pará region, Rio Tapajoz, Rio Jamundá, Faro (Snethlage); Santarem (Chapman and Riker)

2 ♂ 1 ♀, Pará, Bosque

2 ♂ 1 ♀, Obidos (Carnegie Mus.)

2 ♂ 2 ♀, Benevides (do.)

6 ♂ 2 ♀, Santarem (do.)

3 ♂ 2 ♀, Rio Tapajoz, left bank (do.)

This genus is as yet unreported in Amazonia west of our area.

940. *CISSOPIS LEVERIANA LEVERIANA* (Gmelin)

Type locality: Cayenne

2 ♂, Rio Tapajoz, Itaituba (Carnegie Mus.)

941. *SCHISTOCHLAMYS MELANOPIS MELANOPIS* (Latham)

Type locality: Cayenne

Santa Isabel (Snethlage; Santarem (Berlepsch)

1 ♂, Pará, Val-de-Caes

5 ♂ 2 ♀, 4 imm., Rio Tapajoz, Santarem

6 ♂ 3 ♀, Benevides (Carnegie Mus.)

13 ♂, Santarem (do.)

These birds show no approach whatever to the alleged characters of *olivina* Scater. It is quite remarkable that this widely diffused species is practically unrecorded in our area.

Family FRINGILLIDAE

942. *CYANOCOMPSA CYANOIDES ROTHSCILDII* (Bartlett)

Type locality: Carimang River, British Guiana

Pará region, common (all collectors); Rio Tocantins (Snethlage); Santarem (Chapman and Riker); Rio Jary, Monte Alegre (Snethlage)

3 ♀, Rio Acará, Acará

2 ♂ 1 ♀, Rio Tapajoz, east bank

1 ♂, Obidos (Carnegie Mus.)

3 ♂ 2 ♀, Benevides (do.)

4 ♂, Santarem (do.)

2 ♂ 2 ♀, Rio Tapajoz (do.)

943. *ORYZOBORUS ANGOLENSIS TORRIDUS* (Scopoli)

Type locality: unknown; north coast of Venezuela by Hellmayr

Pará (Wallace, Snethlage, Stone); Mexiana Island (Hellmayr, Snethlage); Rio Tocantins, Cussary, Rio Tapajoz (Snethlage); Rio Jamundá, Faro (Snethlage)

9 ♂ 11 ♀, Rio Tapajoz, various localities, east bank.

1 ♂ 1 ♀, Obidos (Carnegie Mus.)

2 ♂ 2 ♀, Benevides (do.)

1 ♂ 1 ♀, Santarem (do.)

1 ♂ 1 ♀, Rio Tapajoz, Miritituba (do.)

944. *ORYZOBORUS CRASSIROSTRIS CRASSIROSTRIS* (Gmelin)

Type locality: Guiana

Mexiana Island (Hagmann, Snethlage); ? Cussary (Snethlage)

945. *SPOROPHILA SCHISTACEA LONGIPENNIS* Chubb

Type locality: Mt. Roraima, British Guiana

Peixe-Boi, Snethlage (Snethlage, as *S. grisea*)

This form is as yet unrecorded between the type locality and Pará.

946. *SPOROPHILA LEUCOPTERA MEXIANAE* Hellmayr

Type locality: Mexiana Island

Mexiana Island (Hagmann, Hellmayr, Snethlage)

A local race of a species widely distributed south of our area.

[SPOROPHILA LEUCOPTERA CINEREOLA (Temminck)]

Type locality: Bahia

Pará, by Graham (Sharpe, in Cat. Birds Brit. Mus.)

There is a probable error of labelling here, this race, the old *S. hypoleuca* (Licht.), not being definitely known north of Maranhão.]

947. SPOROPHILA PLUMBEA WHITELEYANA (Sharpe)

Type locality: Mt. Roraima, British Guiana

Mexiana Island (Hagmann, Hellmayr, Snethlage); Marajo Island (Hellmayr)

948. SPOROPHILA CASTANEIVENTRIS CASTANEIVENTRIS Cabanis

Type locality: Guiana

Obidos (Hellmayr); Arumanduba, Monte Alegre (Snethlage)

1 ♂ 1 ♀, Obidos (Hellmayr)

949. SPOROPHILA CASTANEIVENTRIS ROSTRATA Todd

Type locality: Santarem, Brazil

Rio Tapajoz (Snethlage); Santarem (Chapman and Riker, Hellmayr)

2 ♂, Rio Tapajoz, Pinhy and Caxiricatuba.

12 ♂ 3 ♀, Santarem (Carnegie Mus.)

1 ♂, Rio Tapajoz, Goyana Island (do.)

950. SPOROPHILA MINUTA MINUTA (Linnaeus)

Type locality: Surinam

Nazaré, (Layard); Mexiana Island (Hagmann); Marajo Island (Snethlage);

Santarem (Chapman and Riker); Quati-puru, Maracá (Snethlage)

Rio Tocantins (Snethlage);

1 ♂, Rio Tapajoz, Tauary

2 ♂ 1 ♀, Santarem (Carnegie Mus.)

951. SPOROPHILA BOUVREUIL BOUVREUIL (Müller)

Type locality: Bahia, Brazil

Mexiana Island (Hagmann); Marajo Island (Snethlage)

The extreme northern limit for this well known east Brazilian species.

952. *SPOROPHILA AMERICANA AMERICANA* (Gmelin)

Type locality: Cayenne

Pará (Wallace, Spix); Mexiana Island (Wallace, Hellmayr); Pará region, numerous localities, Marajo Island, Rio Tocantins, and whole of north shore (Snethlage); Santarem (Chapman and Riker)

5 ♂ 2 ♀, near Obidos

4 ♂ 2 ♀, Obidos (Carnegie Mus.)

1 ♀, Benevides (do.)

3 ♂ 3 ♀, Santarem (do.)

The alleged racial variation of this species in our area seems most inconsistent and unsatisfactory. A fine series from Cayenne proves a great deal of individual variation in color. Entirely apart from wear, the amount of white in the wing of males is quite variable. Females are astonishingly variable. Older birds are apparently darker and more richly colored, while younger ones are much paler and grayer, especially below. Size seems quite constant, the wing of males 56-58, ♀ 54-56. The series from Santarem and Obidos were described as *dispar* Todd. All five females are pale and grayish brown below, but not distinguishable from Cayenne birds in similar plumage. The males have more white in the wing than the majority of Cayenne males, but no more than those with the maximum amount of white from Cayenne. These birds are minutely larger, wing of ♂ 59-61, ♀ 56-59. The single female from Benevides is as richly colored as any ♀ from Cayenne, the wing 55. Finally a series from the Solimoës is inseparable from Cayenne topotypes. Hellmayr has pointed out that *leucopterygia* Spix is available for Amazon birds, but the type locality is Pará. Our own view is that the absence of dark females from Obidos and Santarem is a pure accident of small series, that the remaining differences are inconsistent and trifling, and that all birds from Lower Amazonia can be called *americana*.

953. *SPOROPHILA CAERULESCENS CAERULESCENS* (Vieillot)

Type locality: Brazil

1 ♂, Sta. Julia, Rio Irii (Snethlage)

1 ♂, Rio Tapajoz, Pinhy

Our single male is notably paler gray above, with less blackish on the pileum, thus agreeing with Hellmayr's comments on the Rio Irii specimen. The Lower Amazon birds are isolated, and will probably prove separable, when a proper revision of the species can be attempted.

954. *SPOROPHILA NIGRICOLLIS NIGRICOLLIS* (Vieillot)

Type locality: Brazil

Pará region, numerous records, (most collectors); Ilha das Oncas, Mexiana Island, Monte Alegre, Rio Tocantins (Snethlage)

955. *SPOROPHILA LINEOLA* (Linnæus)

Type locality: Surinam

Pará region to Rio Tapajoz (Snethlage); Urucurituba, Santarem (Hellmayr).

10 ♂ 2 ♀, Rio Tapajoz, various localities, east bank

1 ♀, Pará, Bosque

1 ♂, Santarem, (Carnegie Mus.)

1 ♂, Rio Tapajoz, Villa Braga (do.)

956. *SPOROPHILA BOUVRONIDES* (Lesson)

Type locality: Trinidad

North side of River Amazon and Mexiana Island (Wallace, *fide* Sharpe in Cat. Birds Brit. Mus., as *S. amazonica* Sharpe); Obidos (Snethlage)

3 ♂ 2 ♀, Obidos (Carnegie Mus.)

Hellmayr regards *S. ocellata*, *S. trinitatis* Sharpe and *S. amazonica* Sharpe as synonyms of *bouvronides*. We agree that there is a good chance that this species will prove to be a mutation of *lineola*.

957. *VOLATINIA JACARINA JACARINA* (Linnæus)

Type locality: northeastern Brazil

Common throughout our area (all collectors)

5 ♂ 1 ♀, Pará, Bosque

1 ♀, Rio Acará, Acará

4 ♂ 1 ♀, Rio Tapajoz, east bank

2 ♂ 1 ♀, Benevides (Carnegie Mus.)

1 ♂, Santarem (do.)

1 ♂ imm., Rio Tapajoz, Itaituba (do.)

958. *PITYLUS GROSSUS GROSSUS* (Linnæus)

Type locality: Cayenne

Pará region, common; Rio Tocantins, Rio Xingú, Rio Tapajoz. Rio Jamauchim,

Rio Jary (Snethlage)

- 1 ♀, Pará, Val-de-Caes
- 1 ♂, Rio Acará, Acará
- 7 ♂ 2 ♀, Rio Tapajoz, various localities, east bank.
- 1 ♂, Obidos (Carnegis Mus.)
- 1 ♀, Benevides (do.)
- 4 ♂ 4 ♀, Santarem (do.)
- 8 ♂ 2 ♀, Rio Tapajoz, both banks

959. *PERIPORPHYRUS ERYTHROMELAS* (Gmelin)

Type locality: Cayenne

Pará region, common (all collectors)

- 1 ♂, Rio Tapajoz, Caxiricatuba
- 1 ♂, Benevides (Carnegie Mus.)

This Grosbeak has been overlooked on the north bank of the Amazon in our area. Its occurrence on the Rio Tapajoz is a slight extension in its extreme southern range.

960. *CARYOTHRUSTES CANADENSIS CANADENSIS* (Linnæus)

Type locality: Cayenne

Pará region, common (all collectors); Rio Tocantins (Snethlage)

- 5 ♂ 1 ♀, Pará, Val-de-Caes and Bosque
- 4 ♂, Benevides (Carnegie Mus.)

The distributional features of these two Grosbeaks in our area are practically identical.

961. *SALTATOR MAXIMUS MAXIMUS* (P.L.S. Müller)

Type locality: Cayenne

Common throughout our area (all collectors), but unrecorded from Mexiana and Marajo Islands

- 6 ♂ 3 ♀ 2 ?, Pará, Val-de-Caes
- 1 ?, Rio Tocantins, Cametá
- 16 ♂ 11 ♀, Rio Tapajoz, various localities
- 2 ♀, Obidos (Carnegie Mus.)
- 2 ♂ 3 ♀, Benevides (do.)
- 4 ♂ 2 ♀, Santarem (do.)
- 2 ♂ 2 ♀, Rio Tapajoz, both banks (do.)

962. *SALTATOR CAERULESCENS MUTUS* Slater

Type locality: Mexiana Island

Pará region (Snethlage and Stone); Mexiana Island (Wallace, Haggmann, Hellmayr); Marajo Island (Snethlage); Rio Tocantins, Rio Jamauchim and north shore localities (Snethlage)

4 ♂ 1 ♀, south bank of Amazon, Lago Grande

3 ♂ 1 ♀, Obidos (Carnegie Mus.)

3 ♂ 1 ♀, Santarem (do.)

1 ♂ 1 ♀, Rio Tapajoz, Itaituba (do.)

The specimens from Santarem and the Rio Tapajoz may or may not properly represent *mutus* of Mexiana Island. This race is replaced by *azarae* from the Rio Madeira westward, by typical *coerulescens* from Matto Grosso southward, and *superciliaris* (Spix) in eastern Brazil.

963. *SICALIS COLUMBIANA GOELDII* Berlepsch

Type locality: Paricatuba, Santarem

Santarem (Chapman and Riker, Hellmayr); Rio Tapajoz, Maracá, Monte Alegre, Eréré, Rio Jamundá (Snethlage); Obidos (Hellmayr)

2 ♂, near Obidos

3 ♂, 7 ♀, Rio Tapajoz, various localities on both banks.

2 ♂, Obidos (Carnegie Mus.)

9 ♂ 4 ♀, Santarem (do.)

This subspecies is quite isolated from true *columbiana*, and has a very scattered distribution of its own. It is characteristic of grassy areas along river banks.

964. *SICALIS LUTEIVENTRIS CHAPMANI* Ridgway

Type locality: Diamantina, Santarem

Santarem (Chapman and Riker); Rio Tapajoz, Boim and Pinhel (Snethlage)

2 ♂, Lago Grande, west of Rio Tapajoz

8 ♂ 8 ♀, Santarem (Carnegie Mus.)

As now restricted, *chapmani* is exceedingly local.

965. *SICALIS LUTEIVENTRIS FLAVISSIMA* Todd

Type locality: Rocana, Pará, Brazil

Mexiana Island (Wallace, Hagmann, Snethlage); Marajo Island (Hellmayr, Snethlage); Monte Alegre (Snethlage, as *arvensis chapmani*.)

Type series in Carnegie Museum examined.

[*SICALIS FLAVEOLA* Linnæus

“Pará” by R. Graham in Brit. Mus. (Sharpe)

If the specific identification is correct, the locality is probably erroneous.]

966. *BRACHYSPIZA CAPENSIS* subsp.

Rio Acará, Monte Alegre (Snethlage)

These birds might be typical *capensis*, or an unnamed form.

967. *MYOSPIZA HUMERALIS HUMERALIS* (Bosc)

Type locality: Cayenne

Mexiana Island (Wallace, Snethlage); Marajo Island (Hellmayr, Snethlage);

Caviana Island (Brodkorb); Monte Alegre, Rio Jamundá (Snethlage)

3 ♂, Rio Tapajoz, Santarem

4 ♂ 1 ♀, Santarem (Carnegie Mus.)

968. *MYOSPIZA AURIFRONS AURIFRONS* (Spix)

Type locality: Fonteboa, Rio Solimoës

Common throughout the area (all collectors), but unrecorded from Marajo and Mexiana Islands

3 ♂ 2 ♀, Rio Tapajoz, Santarem

5 ♂ 5 ♀, Benevides (Carnegie Mus.)

2 ♂, Obidos (do.)

1 ♂, 1 ♀, Santarem (do.)

8 ♂ 3 ♀, Rio Tapajoz, various localities (do.)

969. *EMBERIZOIDES HERBICOLA* subsp.

Mexiana Island (Wallace, Hellmayr)

The only adult is stated to be intermediate between *herbicola* and *sphenurus* (Hellmayr).

970. *CORYPHOSPINGUS CUCULLATUS CUCULLATUS* (P.L.S. Müller)

Type locality: Cayenne

Pará region, common (all collectors)

8 ♂ 1 ♀, Benevides (Carnegie Mus.)

971. *PAROARIA GULARIS GULARIS* (Linnæus)

Type locality: Guiana

Common throughout our area, but unreported in the Pará region on the south side of the Amazon

27 ♂ 18 ♀, 5 ?, Rio Tapajoz, various localities.

3 ♂ 1 ♀, 1 ?, (do.), (do.) (Carnegie Mus.)

1 ♂ 1 ♀, Obidos (do.)

6 ♂ 1 ♀, Santarem (do.)

972. *ARREMON TACITURNUS TACITURNUS* (Hermann)

Type locality: Cayenne

Common throughout our area on the south bank of the Amazon (all collectors);

Obidos (Snethlage); unreported from Mexiana and Marajo Islands

2 ♂, Pará, Val-de-Caes

1 ♂ 3 ♀, Rio Acará, Acará, and Buenos Aires

19 ♂ 7 ♀, Rio Tapajoz, various localities

1 ♂, Obidos (Carnegie Mus.)

3 ♂, Benevides (do.)

2 ♀, Santarem (do.)

1 ♂, Rio Tapajoz, Aveiros (do.)

2 ♂, (do.), Villa Braga

The two males from Villa Braga differ in having a narrower pectoral collar which does not meet across the chest.

BIBLIOGRAPHY

It is assumed in this bibliography that Snethlage's *Aves Amazonicas* and Hellmayr's volumes on the Birds of the Americas are the foundation stones of our knowledge on the systematics and local distribution and occurrence of birds in lower Amazonia. In the case of the former work, a bibliography of all earlier faunal papers is given. In the latter not only are there ample critical notes, but complete references to all papers with locality records. With few exceptions all papers are omitted from this bibliography, which are cited in those works. Thus Todd's descriptions of new Formicariidae are omitted, as they are cited in extenso in Hellmayr's volume on this family, but Zimmer's papers are given, since they appeared after it.

No attempt has been made to cite every paper mentioning or discussing Amazonian birds in every sort of connection. To do so would entail a bibliography of gigantic length. Such were formerly thought to add to the learning of the authors, but in these hard times are a waste of severely restricted publication funds.

BEEBE, C. W.

1916. *Zoologica*, no. 2, pp. 55-106.

General notes on ecology, habits, moult, etc. of certain birds in the vicinity of Pará.

BANGS, O. AND PENARD, T. E.

1921. *Bull. Mus. Comp. Zool.*, 64, no. 4, pp. 362-398.

A paper of miscellaneous systematic notes, many of which affect species of our area.

BRODKORB, P.

1937. *Occas. Papers Mus. Zool. Univ. Michigan*, no. 349, March 18, 1937, pp. 1-7.

First record of a collection made by Prof. J. B. Steere in 1871 and 1879 on Caviana and Marajo Islands. The list for the former island numbers 49 species, and is the only one as yet published. Quite a number of earlier records are overlooked.

BUTLER, A. L.

1926. *Bull. Brit. Orn. Club*, 46, p. 56.

Description of *Tapaza pella microshyncha* from Utinga, Para.

CHAPMAN, F. M.

1921. *Amer. Mus. Novit.*, no. 2, p. 1.

Description of *Capito brunneipectus*.

CHERRIE, GEORGE K.

1916. Bull. Amer. Mus. Nat. Hist., **35**, pp. 395, 396.
Descriptions of two new subspecies from our area.

CHUBB, CHARLES

1917. Bull. Brit. Orn. Club, **38**, p. 32.
Description of *Columba plumbea wallacei* (Rio Capim).
1919. loc. cit., **39**, p. 42.
The genus *Poliolaema* proposed for certain species of *Myrmotherula* in our area.

CONOVER, H. B.

1934. Proc. Biol. Soc. Wash., **47**, pp. 119-120.
Description of *Psophia viridis dextralis*.
1937. loc. cit., **50**, pp. 191-192.
Description of *Tinamus major olivascens* (Rio Acará).

CORY, C. B.

- 1918-19. Field Mus. Nat. Hist., Zool. Series, **13**, pts. 1 and 2.
Catalogue of the birds of the Americas from the Parrots through the Woodpeckers. A useful reference work.

CUNHA VIEIRA, C. O. da

1935. Rev. do Mus. Paulista, **19**, pp. 327-398.
More or less popular resume of the Cotingidae of Brazil. Lists specimens from our area in the museum, including several records of interest.

GRISCOM, L. AND GREENWAY, J. C., JR.

1937. Bull. Mus. Comp. Zool., **81**, no. 2, pp. 417-437.
Descriptions of new subspecies and critical notes on lower Amazon birds.

HARTERT, ERNST AND GOODSON, A.

1917. Novit. Zool., **24**, pp. 410-419
Contains systematic notes on several species in our area.

HELLMAYR, C. E.

- 1924-1938. Field Mus. Nat. Hist., Zool. Series, **13**, pts. 3-11, the continuation of the Catalogue of Birds of the Americas, begun by Cory, including the entire order Passeres.
Invaluable for its numerous critical notes, and locality references, including practically all faunal papers dealing with our area.

HELLMAYR, C. E. AND GYLDENSTOLPE, H.

1937. Arkiv for Zool., **29**, pp. 1-3.
Description of several new forms from Amazonia.

MIRANDA-RIBEIRO, ALÍPIO DE.

1920. Rev. Mus. Paulista, **12**, no. 2, pp. 1-82.

A review of the Parrots of Brazil, with descriptions of new genera.

1927. Bol. do Mus. Nac. do Rio Janeiro, **3**, no. 2, June, pp. 1-11.

Notes on a few birds from Santarem, collected by Hagmann. *Sakesphorus hagmanni* described as new.

NAUMBURG, ELSIE M. B.

1933. Amer. Mus. Novit. no. 648, July 21.

A review of *Zenaida auriculata*, including the characters and range of *jessiae*.

1937. Bull. Amer. Mus. Nat. Hist., **73**, art. 3, Dec. 31, pp. 139-205.

Notes on Conopophagidae, Rhinocryptidae and Forimcariidae, with occasional reference to lower Amazonian forms.

NEUMANN, OSCAR

1927. Ornith. Monatsberichte, **35**, p. 89.

Description of *Pyrrhura perlata anerythra* from the Rio Tocantins.

1927. Verhand. Ornith. Gesell. Bayern, **17**, pp. 428-431.

Review of *Pyrrhura perlata* Spix.

1931. Mitt. Zool. Mus. Berlin, **17**, p. 442.

Description of *Brotogerys st. thomae takatsukasae* from lower Amazonia.

1933. Bull. Brit. Ornith. Club, **53**, pp. 93-95.

Review of *Penelope superciliaris*.

OLALLA, A. M.

1935. Rev. Mus. Paulista, **19**, pp. 419-423.

Interesting account of *Berlepschia rikeri*.

OLIVEIRA PINTO, O. M. de.

1938. Rev. Mus. Paulista, **22**, pp. 1-566.

Part I of a catalogue of the birds of Brazil, all the orders and families through the superfamily Furnariides of the Passeres. A very useful compilation, giving the original description, type locality, general distribution and Brazilian range of every form.

PINTO-PEIXOTO, PEDRO.

1923. Archiv. Museu Nac. do Rio de Janeiro, **24**, 1923, pp. 267-273.

Brief list of species collected on Marajo Island during a ten day visit.

SASSI, M.

1932. Ornith. Monats., **40**, pp. 120-121.

Description of *Notharchus macrorhynchus paraensis*.

SNETHLAGE, EMILIA

1910. Bol. Mus. Goeldi, **6**, pp. 226-235.
A most valuable discussion and summary of the isolated savannahs in Lower Amazonia, which contain birds peculiar to the "campo" fauna.
1914. Bol. Mus. Goeldi, **8**, for 1911-12, pp. 1-534.
This is the well known Aves Amazonicas, the foundation work for our area. It summarizes all preceding papers, which are consequently not listed again in this bibliography.
1913. Jour. f. Ornith., **61**, no. 3, July, pp. 469-539.
A most important paper on the distribution of birds in Lower Amazonia.
1914. Ornith. Monatsber. **22**, pp. 39-44.
Descriptions of new birds from Lower Amazonia.
1924. Journ. f. Ornith., **72**, pp. 446-450.
Descriptions of new birds from Lower Amazonia.
- 1925a. Bol. Mus. Nac. Rio de Janeiro, **1**, no. 6, pp. 407-412.
A reprint in Portuguese of the preceding article.
- 1925b. Journ. f. Ornith., **73**, pp. 264-274.
Descriptions of new birds from Lower Amazonia.
1926. Bol. do Mus. Nac. Rio de Janeiro, **2**, no. 6, Nov. 15, pp. 35-70.
A report on study in Europe in 1924-25, of collections made in Brazil at various times 1914-23. The introduction contains general remarks of interest on ecological and avian boundaries in Ceara, Maranhão, and Pará. Lists of the collections follow. List B deals with 143 species from Pará, collected 1914-17, including some records of interest from our area. Unfortunately specific localities are usually omitted.
- 1930a. *ibid*, **6**, no. 1, p. 10.
Records a specimen of *Liosceles thoracicus* from Villa Braga, Rio Tapajoz, June 19, 1917.
- 1930b. Journ. f. Ornith., **78**, pp. 58-65.
Further discussion of the distribution of birds in Brazil.
1936. Bol. Mus. Nac. Rio de Janeiro, **12**, no. 2., pp. 83-92.
List of Brazilian Woodpeckers in the museum. Includes some records from Lower Amazonia.

STONE, WITMER

1928. Proc. Acad. Nat. Sci. Phila., **80**, pp. 149-176.
A list of birds collected near the city of Pará by Bond and de Schauensee.

TODD, W. E. CLYDE

- 1937a. Proc. Biol. Soc. Wash., **50**, Oct. 28, pp. 175-178.
Review of *Crypturellus variegatus* and its allies.

1937b. *ibid*, pp. 183-184.

Description of *Chaetura spinicauda acthalea* (Pará).

1937c. *ibid*, pp. 185-190.

The Pigeons of the *Columba plumbea* group.

1937d. *Annals Carnegie Mus.*, **25**, art. XIX, Nov. 16, pp. 243-255.

Descriptions of numerous new birds from our area.

ZIMMER, JOHN T.

1925. *Proc. Biol. Soc. Wash.*, **38**, p. 87.

Pipra iris Schinz the correct name for *P. opalizans* Pelzeln.

1929. *Field Mus. Nat. Hist., Zool. Ser.*, **17**, pp. 3-18.

A review of *Deconychura*.

1931-1938. *Amer Mus. Novitates*, nos. 500, 509, 523, 524, 538, 545, 558, 584, 646, 647, 668, 703, 728, 753, 756, 757, 785, 819, 860, 861, 862, 889, 893, 894, 917, 930, 962, 963, 994.

These papers constitute *Studies of Peruvian Birds*, Nos. I-XXIX. They are really critical reviews of the genera of the families Formicariidae, Furnariidae, Dendrocolaptidae, Pteroptochidae, Conopophagidae, Pipridae and Cotingidae, which occur in Peru.

Whenever pertinent the great Olalla collections of these birds from Lower Amazonia are listed. Numerous taxonomic notes and descriptions of new forms from our area. The last four numbers begin the Tyrannidae. The first twenty-five numbers constitute a "volume", and a title page, contents, and index were issued July 20, 1937.

1938. *Proc. Biol. Soc. Wash.*, **51**, March 18, pp. 47-52.

Critical notes on the members of the *Crypturellus noctivagus* group, occurring in our area.